

# POPULAR Computing WEEKLY

Only 50p.

23-29 October 1986

Vol 5 No 43

## NEWS DESK

W H Smith boots  
Mastertronic from  
Gallup chart

Amstrad PC's  
reliability  
questioned

## SEGA MASTER SYSTEM



Full review plus  
Sega software  
starts page 14

## Games consoles: the threat to the 8-bit micro

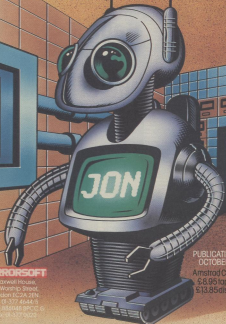




MIRRORSOFT

# ICON JON

What happens to a program that doesn't want to die?  
WHY IT TRIES TO ESCAPE, OF COURSE!



**MIRRORSOFT**

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PUBLICATION  
OCTOBER

Amstrad CPC  
£8.95 tape  
£13.85 disk

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## SOFTWARE ►

## 13 Forecasting

Statistics without tears from Amstat, for Amstrad CPCs and PCWs.

## K-Switch

Load two programs into your ST and switch from one to the other at will. Particularly useful for transferring in-

formation on utilities, from a database to word processor, etc. Mark Jenkins has the details.



## 14 Sega Master System

Games machines are back in vogue again. Amstrad is set to import and market the Sega range of models from the US. See for yourself how

## ◀ HARDWARE

these video consoles have changed since the days of ping-pong on the telly.

John Cook looks at the machine and the software which will be available for it.

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Adventure  
Helpline

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The long-awaited Knight Time tips, plus this week's Setup Top Twenty.

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Infinite variety this week, with *Rogue* from that graphic maestro Epyx on the ST, the Spectrum version of Software Projects' chart-topper *Dragon's Lair*, *The Great Escape* from Ocean, and *Camelot Warriors* from Amstrad on Amstrad CPCs.



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ABC

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# Games machines threaten the micros

GAMES consoles could mean the end of the current generation of 8-bit home computers, according to predictions in the software industry. At the launch of the Sega last week (see review, page 14) Ashley Gray of Amstrad was suggesting this possibility, while Activision managing director sees the industry splitting mainly between consoles and the more expensive 16-bit machines.

"I see games cartridges running alongside budget games," he says, "but most of the software is going to be more expensive." The argument goes that the standard of games that will be available on the consoles is so high that games players will move over to them from the

cheaper machines. Logically the market for games on the latter will decline, leaving the likes of the ST and the PC to hold the ring in the home micro market.

The success of the consoles will however depend on software availability, and in the short term it's uncertain how much there will be. Activision already produces software for the machines in the US, and will be able to import it, while Amstrad is lagging in Sega's own cartridges, but there seems to be little development currently under way in the UK.

Sega development systems should start to circulate shortly, but Atari has yet to contact software houses about its 7800 machine,

while one major software producer veered abusive on the subject of trying to get specifications for the Nintendo out of UK distributor Midas.

Price will also be a barrier. Consensus sees cartridges starting off at £16-£20 and dropping over the next year, but concludes that although the software houses will push for price cuts the console manufacturers will want to keep prices up. He's not willing to predict which machine will do best here, but although price will be a factor — the Atari will be around £40, the Sega £105 and the Nintendo £140 — he feels that the company with the best distribution will eliminate the market for consoles.

## Mastertronic hits out over changes in chart

THE domination of Mastertronic in the Gallup chart has dramatically collapsed this week, largely to the benefit of its budget rival Finland.

This week's Top Twenty (see page 19 for details) has six Finland titles (not all budget releases) against Mastertronic's one. In the top forty, Finland has 11 games, and Mastertronic five, compared to ten out of 20 in September.

The reason for this is that this week, W H Smith, one of the leading suppliers of games software, has selected 53 of its stores to retail sales figures to Gallup each week.

Gallup software researcher Matthew Brown said, "This is the first week that we have W H Smith online. We were aware that something like this was going to happen, but I don't think anyone realised it would be quite so drastic."

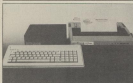
Frank Herman, chairman of Mastertronic, pointed out that the inclusion of W H Smith would inevitably tilt against his company's titles.

"It's simple, W H Smith does not stock Mastertronic titles. Mastertronic was not prepared to pay the distributor margins required to get into Smith's."

On the question of whether either Finland or Mastertronic have been fairly represented in the charts in the past, Matthew Brown said, "If the charts are ever under-representing Finland before, then we've put it all to rights. If we're over-representing, then we'll look closely at it."

Frank Herman had no doubts about Mastertronic's share. "I've never thought we were over-represented. Our biggest outlets are Woolworth's, Tesco, and Toys 'R Us — which are totally ignored by Gallup."

Finland was understandably pleased at its increased visibility in the Gallup chart. "It's good to see that the most representative source of market information is starting to become backed by the multiples," said Finland marketing manager Tom Watson.



The complete Complement

## First sightings of new Saga at Microfair

FIVE new versions of Saga's new Complement will be on display at this Saturday's ZX Microfair, and although the machine won't be on sale, Saga will be taking orders for delivery over the next few weeks.

The system is basically a bundle of disc drive, add-on keyboard, printer and software, and at £244 is substantially cheaper than the cost of the items separately. The keyboard is a Saga 3+, while

the disc drive is the Opus Discovery, which is as near a disc standard for the Spectrum as you can get.

The printer is capable of 150 cps, and can achieve 2½ cps in NLD mode, while the bundled software, which includes word processor, spreadsheet and data base, is controlled by a menu-driven system that bypasses Spectrum Basic. The system will be reviewed in full in next week's issue.

## Amstrad PC reliability is questioned

THE reliability of Amstrad's new PC was questioned last week as chemical giant ICI decided against buying large numbers of the machines after a series of tests. The PC's small footprint seems to have been its undoing here, as it has no fan and little free-space inside. ICI feels that this could cause overheating.

Several individuals who bought the machine are also known to have had problems with it, although an Amstrad spokesman suggested that these were caused by "over-loading the power supply." A PC with its full complement of expansion cards would obviously run hotter, but any problem is more likely to relate to the power design.

The IBM PC itself and many add-on cards are designed from components with a higher power draw than Amstrad's own circuitry, and the company may therefore have underestimated the rating it needed for its power supply and expansion slots.





The new Business 2

## Memotech's in Business

MEMOTECH'S first new computer since its rescue from the liquidator is to be the Business 2, a micro, printer and monitor bundle that will sell for £650. The machine runs CP/M 2.2 and has a single 3½ inch disc drive as standard, with Ram of 256K plus a 6128K Ram disc.

The Ram disc can be expanded up to 4MB, and the machine has a wealth of interfacing: twin RS232C, Centronics, twin composite video,

RGB and joystick ports. It also has a socket for the MSX 2 graphics chip, which will allow the machine to be used with video cameras and frame grabbers.

It will run existing Memotech tape software, and an Amstrad emulator (plus a 3 inch disc drive will also be available) to allow it to run PCW software.

The machine should come onto the market in the next few months.

## Adventurer's Club reopens

THE Adventurer's Club was due to reopen its doors on Monday after an absence of several months. According to a letter sent out to members by organizer Harry Mueller the last few months have been "a lengthy takeover battle" for the Club, which is a limited company.

Mueller has now emerged as a triumphant 51 per cent shareholder and intends to resume publication of the Club's newsletter from the end of this month. Subscriptions will be extended to compensate for the months in which members received nothing.

## Micro smuggler jailed

A COMPUTER expert was fined £25,000 and jailed for nine months last week after pleading guilty to eight charges of illegally exporting computer equipment to the Soviet Union.

Alan Simmons was arrested at Birmingham airport in 1984 after undercover Customs officials watched him unloading a consignment of

equipment into an export warehouse.

Simmons fell foul of the Nato ban on export of equipment that could be used by the Eastern Bloc for military purposes. The banned list includes equipment from mini-computers down to 16-bit micros, as even the humble OS requires a special export licence.

## Software Hotlines

From computers for picking of the year (see Hotlines last week, with *Mad Mice by Fire* "all in the best possible taste") **Word, Dorell** now make a strong bid in the "Clutching of hands over the face - Oh God what am I doing here!" award, with the release of *Far Wars*. Given a *Spartan* Technically maddening, astoundingly dull, one assumes that someone in the company has gone madly AWOL.

Jokes lend they can't be serious, can they? Are acceptable at £1.95, but when they are sold at £9.95 they loose much of their humor. Programmer/designer **Julian Todd** has no shame... his name is there on the title. Julian, do the computer industry a favour. Take up boxing training.

From a *Daddy to a Duck*, *Howard the Owl* - once comic book character, now comic, soon to be computer game. *Activision* should be releasing it later in the year, but we wait straight to the source for the game in this case) and saw the film last week. *Popstar's answer to Harry Norman* tells me that this duck is more than a little tame. *Big A* must find this disappointing to say the least, as it is rumored that in the film rights carve-up with *Electric Dreams*, *Activision* chose Howard in front of



Far Wars: blown a sparky

that blockbuster *Africa*. They must have been quackers.

More and more it seems that retailers and distributors are taking commercial decisions that are out of kilter with what you, the public, get to see in the shops. The actual selection and display policy of the multiples is probably the most serious of these, but how's this for a silly one.

**Infogrames** is planning to launch another kind of video-cassette program later this year called *Murder on the Atlantic*. It involves a murder on board an Atlantic liner just before the outbreak of the Second World War with spies, intrigue, mystery, etc, etc.

Now, together with the tape/disc, **Infogrames** have a whole load of supplementary material to help the budding sleuth. Maps, newspaper cuttings, pictures (see the holiday snap below), slide books, letters - even some leaflet too. **Infogrames** would be proud of this little lot - but it seems because it's a bit out of the ordinary, you may never get the opportunity to buy it. Pass the sack bag.

John Cook



Jenny in Desauville



# Seeking the software for Sega system

SOON, now for the invasion of the games consoles. Atari, Nintendo and Sega are all convinced that the market everyone thought was dead is alive and kicking, and poised for spectacular growth through the next year.

Sega's Master System is being distributed in the UK, Holland and Germany by Amsoft, and at the launch last week Amsoft was talking about the hype, why and whereabouts of the dedicated games machine.

The boom that is perceived as being about to happen is based on the continued popularity of coin-operated arcade machines, and the reasoning is that if you can put together a games console that will allow people to play arcade standard games at home you can sell lots and lots of them.

It is, however, vital to get adequate supplies of games into the shops alongside the consoles. This is one of the

problems they've faced in the past, and could spell trouble in the future. Sega is desperate in the coin-op business and, according to the company's European managing director Victor Leslie, releases around 12 new titles a year.

Now if you accept that the home player's performance differs from the arcade player's - in that while the latter plays until the money runs out, the former plays until sick - it's likely that the games consoles will need to have many more titles available for them, and these are unlikely to come from Sega.

Frank Krueger, marketing manager of Amsoft, says that the software for the machine will be fairly tightly controlled.

Software houses wishing to write for it will first have to obtain licences from Sega in Japan. Leslie claims they were discussing up for them on his last visit, then write the



Sega: Growing a head on the games market

game, and then get Amsoft's agreement to market it.

In terms of volume of software there are clearly problems here. Any company wishing to write for the Sega has to be big enough to negotiate the licence and also big enough to sustain the cost of developing a game with no guarantee that it will ever be released.

And while Amsoft doesn't envisage any problems in negotiating with Japan it's almost certain, given the bad nature of much of the British software industry, that some companies will face delays and frustration.

The logical alternative, to write and release the software independently, may be closed to people who want to write for the Sega. The machine uses cartridges and

Atari can't handle the media for the presence of some form of code that is Sega's copyright, so if you don't have a licence and you write something that runs on it you're probably a pirate.

So if the machine takes off we're likely to see less software produced by lesser companies, and while on average it should be better it will be mainly commissioned work, and will lack the off-the-wall innovation that's generated by having machines and users can actually program. Naturally, it's in the interest of the bigger software houses to have a more controlled market, and to up the ante in terms of entry cost, but is it in the interest of the users?

John Lettice

## QL's return planned for ZX Microfair

THE next ZX Microfair - the 20th - takes place at Central Hall, Westminster this Sunday (October 26). This is a change of venue from recent Microfairs. Central Hall is situated opposite Westminster Abbey.

The show's organiser, Mike Johnson, is enthusiastic about the products on show this weekend. "We'll have the Sega Complement on display, and Sandy is showing prototypes of its super-QL type machine. CST will also be there with Thor."

But what about Amsoft? Won't it be there to take Sinclair's place with the Spectrum Plus 2? "Well, I was hoping that Alan Sugar would come and sell one or two off

the back of a barrow, but apparently not," said Mike.

"But I wouldn't worry. I expect there'll be quite a few independent companies selling Plus 2s on the day."



Thor: Back for the Microfair

## Geoff Heath hikes over to Mastertronic

GEOFF Heath, who resigned abruptly from the post of UK managing director of Melbourne House last month, joins Mastertronic on November 1.

He will be head of new business development, with responsibility for researching new areas for Mastertronic to go into.

Mastertronic has also acquired Bulldog Distribution, the company which was bought by Melbourne House while Heath was managing director there.

Bulldog is responsible for supplying software to Toys R Us, among other outlets.

Geoff Heath owned a music



Heath: Researching new business opportunities

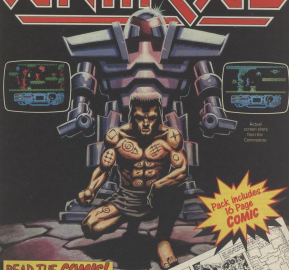
publishing company before entering the software market as head of Activision in 1984.

He joined Melbourne House in May of last year, and his move to Mastertronic is probably related to his interest in distribution.



# THE SACRED ARMOUR OF

# ANTIRIAD



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Commodore

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**PLAY THE GAME!**



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Access and Barclaycard holders phone 01-258 0751







## Micro Focus produces PC Cobol package

MICRO Focus has produced a special £99 educational package for PC compatible machines. The package is aimed at computer language teachers and consists of Personal Cobol plus an accompanying book, free while stocks last.

The program is a fully integrated set of productivity tools that includes Micro Focus' Animator software testing facility. The book is

Cobol on Microcomputers, by Alan D. T. Fryer. The package is available to educational establishments from Micro Focus, and to individual users by Heath.

Details from Micro Focus, 36 West Street, Newbury, Berks RG13 1JT. Tel: 0635 32844; or

Heath, The Old School, Greenfield, Bedford MK45 6DE. Tel: 0625 718181.

## Prestel goes for gold

FROM December Prestel subscribers will be able to access the Telecom Gold electronic mail service via a new gateway, which will ultimately mean that messages will be able to be transferred across both networks.

The gateway allows searching information of the sort produced by Gold to be formatted in Prestel style. Prestel users will be able to edit text prior to transmission, and to move straight to dial's ID entry point from Prestel.

Details from Prestel, Telephone House, Temple Avenue, London EC4Y 0SL. Tel: 01-822 1055.

## Low-cost PC packages

MAP Computer Systems has launched three specialist packages for IBM compatibles and the Amstrad PC. *Review File* costs £119 and is a program designed for newspapers' stock control and accounting, dealing with publications stocked, orders, delivery lists, overdue re-

mindings and monthly accounts.

*Sales Administration and Management* is £79 and provides facilities for mailings, prospecting, follow up diary and a range of other sales-related matters. *Life and Pensions Planning* is a system for the life assurance and pensions industries, dealing with life assurance, pensions, capital conversion and other related areas. It costs £99 for the planning module, and £129 for management.

Details from MAP Computer Systems, 105-107 Windsor Road, Otham OUS 18P. Tel: 061-624 5552.

## Mini on Rom

RAM Office 2 is now being sold in Rom version for the BBC B, Master and Master Compact computers. The £55.95 product, which is contained in four chips mounted on one board, allows immediate access to the six modules of word processing, database, spreadsheet, graphics, label printing and communications.

Details from Database Software, Europa House, 50 Chester Road, Hazel Grove, Stockport SK7 8NY. Tel: 061-463 2732.

## Diary Dates

### OCTOBER

26 October

#### 26th EX Mainframe

Central Hall, Westminster, London SW1

Details: Social meetings, hardware and software papers.

Price: £1.50 adult, £1 children to advance rates, £2 and £1 on the door.

Organiser: Mike Johnson, 01 801 9172.

27 October

#### Computer Club BS

New Court Comprehensive School, Birmingham Road, Walsall

Details: Mainly Amstrad but includes a Sinclair session.

Price: 25p

Organiser: West Midlands Amstrad Users Group, 021-428 1915.

30-31 October

#### Hampshire Computer Fair

Southall, Southampton

Details: Business computers.

Price: Free entry by business registration.

Organiser: Tameside Exhibitions, 0753 31552.

### NOVEMBER

1 November

#### Ream Dragon Show

Mainstone Methodist Hall, Ream Green, Middlesbrough

Details: Local Dragon show.

Price: £1 adult, 50p children.

Organiser: Computer, 0611 733659.

7-9 November

#### Electron and BBC Micro User Show

New Horticultural Hall, Grosvenor Street, London SW1

Details: Hardware, software and peripherals for the Electron, BBC micro and Master series.

Price: £3 adult, £2 children, £1 discount for advance booking.

Organiser: Database Exhibitions, 061-463 5525.

8 November

#### UREUS National Electron Show

National Water Centre Museum, Birmingham

Details: Electron software and hardware.

Price: Free

Organiser: UREUS, 07562 2355

15 November

#### Wales and West Computer Show

Central Hall, Cardiff

Details: All types of home computer and support.

Price: £1 adult, 50p children.

Organiser: Preston Exhibitions, 0525 62285.

21-23 November

#### The Commodore Computer Show

Newport, Pinnermarch, London W6

Details: Hardware, software and peripherals for the Commodore range of computers.

Price: £3 adult, £1 children, 21 discount for advance booking.

Organiser: Database Exhibitions, 061-463 5525.

26-30 November

#### The Atari Christmas Show

New Horticultural Hall, Gwynedd

26th November, London SW1

Details: Hardware, software and peripherals for the Atari range of computers.

Price: £3 adult, £2 children, £1 discount for advance booking.

Organiser: Database Exhibitions, 061-463 5525.

29 November

#### Wight Computing Fair

Spit Team Hall, Ryde, IsW

Details: Local show covering wide range of subjects.

Price: 50p

Organiser: Wight Computing Users Group, 10 John Street, Ryde, Isle of Wight PO33 3PY.

Price, date and venue of shows can vary, and you are therefore strongly advised to check with the show organisers before attending. Popular Computing Weekly cannot accept responsibility for any alterations to show arrangements made by the organisers.



## Free flightsim from Microsoft

MICROSOFT is offering a £29.95 home support package to go with its new low-cost PC products, *Word Junior* and *Multiplan Junior*. The package gives you 12 months' telephone support and comes with a free copy of the Microsoft *Flight Simulator*, which usually costs £45.

Unfortunately it doesn't seem possible to get the free *Flight Simulator* without buying *Word* or *Multiplan* first, as you've got to spend a coupon in.

## Einstein owners join the Elite

TATUNG Einstein owners can now play *Elite* with the aid of the company's Spectrum Emulator. The emulator, which costs £49.95, plugs into the Einstein and operates in con-

junction with software that allows 2D Spectrum games, including *The Hobbit*, *Demolition* and *Elite*, to be played on the machine.

At £49.95 for the Emulator and £9.95 for the software it's something of an investment, but it's cheaper than a Spectrum.

Details from Tatung UK, Stafford Park 10, Telford, Shropshire TF3 3AR. Tel: 0892 613111.

## Training for Amstrad PC

FIRST Class is organising a training course for Amstrad PC owners at its training centre in Basingstoke. The one day course costs £85 and covers the PC's hardware, operating system and bundled software.

Details from First Class, In-sec, 1, Yeats Road, Basingstoke, Hants RG24 0PL. Tel: 0256 462344.

## Tandy to sell cheap PC programs

TANDY is to back up its 100004 low-cost PC compatible with a range of cheap software, to be sold through its stores from the end of this month on. On the serious side the software includes the Trust Hi-Res Printer look-alike at £49.95, Lotus clone *VP-Planner* (£59.95) and *Mel-spain* (£75).

Details from Tandy UK, 0823 473738.

## Accounts pack for Compact

MEADOW Computers has issued a Master Compact version of its *More-Reader* program. The sales and purchase ledger has been enlarged to 1,000 accounts, with 5,000

transactions per month per ledger. The program costs £250.

Meadow is also selling Master Compact versions of the *Micro-Stack* stock control program at £86.25 and an *Extended Payroll* program for the *Atmos-Reader* suite at £57.48.

Details from Meadow Computers, 11 London Street, Whitechurch, Harris. Tel: 025692 2008.

## High resolution mono monitor

THE IBM 12 PC is a £89 high resolution monochrome monitor for IBM PCs and compatibles. The monitor has a 12 inch screen and needs a Hercules standard card to connect it to the PC.

Details from Hercules, Unit 1, 243 Kingsley Bridge Road, London SE26 5BA. Tel: 01-778 1414.

## Competition

# Join in with the Archers!

**F**orget Lofly's plight in *EastEnders*. Stop worrying about how the Dallas scriptwriters will cope with having to write off an entire series as a signpost of Pam's imagination. This is the Big Giddy soap opera of them all — *The Archers*.

*The Archers* is now the world's longest running broadcast serial, and has just become the subject of an interactive fiction computer game by Masque Publishing.

To celebrate the occasion, Masque has come up with 20 copies of *The Archers*

game to give away to *Popular* readers, and we've racked our brains to come up with the competition to go with it.

### How to enter

And here it is. All you have to do is think up some suitable lyrics to go with *The Archers* radio signature tune; you know, the one that goes 'Dumdy dumdy dumdy dum, dumdy dum dy da da, dumdy dumdy dumdy dum, dumdy diddy da'.

That's it. Nothing rude, please, and something with a (jagually) *Archers* feel to it would be appropriate.

### Conditions

The closing date for *The Archers* competition is Friday, November 14. The 20 people who submit the best set of lyrics, in the opinion of the judges, will each receive a copy of *The Archers* for the machine of their choice.

Winners' names will be printed in *Popular Computing Weekly*, November 27.

One entry only per person, please.

Fill out the coupon, or a photocopy, and send it to *The Archers* Competition, *Popular Computing Weekly*, 12-13 Little Newport Street, London WC2H 7PP.

Name .....

Address .....

Suggested lyrics .....

If I win, I would like a copy of *The Archers* for Spectrum ☐ tape ☐ Commodore 64/128 ☐ tape ☐ Amstrad CPC 484/604/8128 ☐ tape ☐ or disc ☐ Atari 32/XX ☐ tape ☐ MSX ☐ PCW 8256/8512 ☐ disc

Tick appropriate box



The faces behind the voices on *The Archers*



## The whole Spectrum

For the benefit of your Spectrum 128 owning readers, here's an update on the National 128 Spectrum User Groups activities since its formation in June.

I was flooded out by membership applications and by early July, with the help of Kim Foley, I set up a Microsoft Bulletin Board, Heatsink, to keep members in touch with all the news, views and reviews of interest to discerning 128 owners. I have now extended this idea to produce a 'digestive'.

Membership of the group is open to all 128 and Plus 2 owners and are Spectrum 486 owners thinking of upgrading. It costs (including subscription to Heatsink) £2, payable to Mr N Foddes at the address below.

The release of the Plus 2 should mean that at long last 128 owners will have proper 128 software. The overwhelming support that the National 128 Spectrum user Group has had only goes to show that far from being a white elephant the 128 has only touched the surface of its possibilities.

*New Facilities  
D. Darby Street  
Mossley  
Adrian's contact: you  
Parsnippole*

## Less than Einstein's brilliance

On reading your review of Tatung's Einstein 256 computer in the October 8 issue of *Popular Computing Weekly*, I feel compelled to point out inaccuracies in the review.

The resale facility is obtained by simultaneously pressing Alpha Cont, Control and Shift keys. This feature cannot be disabled in software, as implied by Duncan Evans.

The statement that Tatung is working on Amstrad emulation programs is incorrect. Two such programs were developed by third parties, which are *Amstar* by ACC Computer Services of Margate and *Amstar* by Systems of Burnley.

Both programs are available now. Amstar was available at the launch of Einstein 256 at the PCW show. Your reviewer seemed to think the Amstrad emulation wasn't yet available.

There seems to be a misunderstanding about Einstein 256's memory organisation. Duncan Evans said that the Ram used up 192 of the 64K of Ram. This is quite wrong, the 192 has access to, and uses the whole of, the 64K of Ram. The 19K Ram is bank switched in when

needed.

In comparing Einstein 256 with the Amstrad 'best' Duncan Evans implies that the software base for Einstein 256 is poor, particularly for 'serious' use. Einstein 256 has, already, over 500 titles available, ranging from programs such as *Monster Pro-Amateur*, *Office 2* and *Multiplan* to games such as *Manic Miner*, *Spacezap* and *Baron*. Software houses such as Orion, Software Projects Ocean, Mongoose, Hewitt, Gamma Graphics, and Komari are all writing software for the machine, and at least three of them are writing high resolution games.

A point seemingly missed, is that Einstein 256 is compatible with Brainin, and can therefore use its software base.

When referring to the 'well-established 83841/8512's', one can ask what happened to the well-established Einstein, which is still in production here in Bedford?

The general impression I get is one of a heavy bias toward Amstrad, to the detriment of objectivity. Whilst I concede that Amstrad is a volume seller, this does not of itself speak for technical excellence or value for money in terms of features, performance, specification and reliability, our products for our ship Amstrad. As to price, Einstein 256 is 15% less than

the PCW. Brainin 256 is £350 including VAT and comes with a colour monitor. The PCW is £360 ex Vat (£450.00 incl. Vat) with a monochrome monitor.

*D. P. Darby  
Technical Manager  
(Computers)  
Tatung (UK)*

The impression that Tatung itself was working on the Amstrad emulation programs was gained because they were being demonstrated on Tatung's stand at the PCW show, and thus presumably have Tatung's endorsement.

Amstar was given the opportunity by one of the *Popular* staff to run *Wordstar* on the Einstein - it didn't work.

Your point about the Einstein 256's memory organisation does not appear to take into account the fact that if the memory is bank-switched, then, while banking in 19K Ram, it does have access to 19K of the Ram.

We did not intentionally imply that the Einstein's software base as a whole was 'poor' compared to Amstrad's, but that the type of software suitable for the Einstein fell squarely into Amstrad territory. Comparison continued on page 118

# Puzzle

## Puzzle 230

I have one of those digital alarm clocks on my bedside table. It operates on a 24-hour system, and displays the hours and the minutes. There are four digits in the display, two for the hour, and two for the minutes.

Sometimes I find that if the digits of the display are read in reverse order, the result also produces a time on the 24-hour clock. For example, the display 04:11 would produce 11:50 when reversed.

In twenty-four hours from 00:00 to 23:59 there are 1,440 different times displayed. How many of these times will produce a possible time when they are reversed?

The other day I looked at the clock before going to sleep. When I awoke I noticed that the figures were now in reverse order. I had had between seven

and three-quarters and eight and a quarter hours' sleep.

Can you say what these times were?

## Solution to Puzzle No. 225

The bicycle cost £48.92.

The program uses two *For/Next* loops for the pence and pounds value of the cost of the bike. Line 40 converts this value to the amount in pence.

The pounds value is then converted into a string (X\$), and the two digits are reversed in line 60 into string Y\$. Line 70 takes this value and adds it to the original pence value times 100. This in effect reverses the pounds and pence values. If this sum is equal to twice the original amount minus 15 (500 pence) the results are printed.

## Winner of Puzzle No. 225

This week's winner is Michael Gorman of Billingham, Cleveland, who will receive £10.

## Rules

The closing date for Puzzle No. 230 is November 10. Answers on a postcard please.

PC 230  
 10 FOR POUNDS=10 TO 99  
 20 NEXT POUNDS  
 30 FOR PENCE=100 TO 999  
 40 NEXT PENCE  
 50 X\$=STR\$(POUNDS)  
 60 Y\$=REVERSE(X\$)  
 70 Z\$=Y\$+STR\$(PENCE\*100)  
 80 IF Z\$=STR\$(POUNDS\*200-1500) THEN  
 90 PRINT POUNDS;PENCE;PENCE\*100  
 100 NEXT POUNDS  
 110 NEXT POUNDS



was made with the Amstrad range because the package - 230 processor chip, plus monitor and 3 inch disc drive - is directly competing, and the capabilities are similar.

We used the term well-established for the £294/99 12s with reference to the Amstrad's user base rather than longevity - and would be surprised if the original Einstein had sold as many in the UK as the PCWs.

## Power tripping

I find it inconvenient to have to take my monitor everywhere I take my Amstrad 6128 computer, as the monitor contains the power supply for both the computer and the disc.

Can anyone notify me if you know of anyone marketing a suitable power supply?

Lee Barton  
Kusson

## No more GAC

I don't mean to continue the Duff vs GAC debate, so I won't, even though I could write off a string of comparisons in favour of one or the other.

What I would like to say is that I find the Amstrad GAC keyboard repeat rates in the drawing part of the program too fast and I'm sure that if many authors were to step through their drawings they would find that they have wasted many bytes with repeated commands.

Now on to the subject of different character sets on the Amstrad GAC. No, I don't have the solution, but I do have an idea.

When I use my Duff I have a Basic loader program, which first loads up the character set, then the main program, and calls it instead of autostarting it. I have found that a GAC adventure loads into an area of memory too low for a Basic program to reside anywhere.

Now I'm sure that some machine code whizz out there can write a small routine (probably relocatable) that will reside somewhere up near high memory that would load an alternative character set, then the main adventure and call it.

I can provide the memory locations if need be, so, please, can anybody help?

Lee Ford  
84 Severnside Road  
Carnarvon  
Surrey



"You just slipped in and it shatters the keyboard!"

## Luxury dump

I thought some of your readers might be interested to know how to get across dumps of pictures created using Koolha Painter, as the program does not allow for such a luxury. I cannot claim credit for the screen dump routine, however, which was printed in *Aspects*, September 18, and was written by G Papper.

Firstly, a machine code monitor is required. Don't be put off by this if you don't know anything about machine code as the operations involved are both brief and simple. Any monitor will do as long as it has a command to copy a block of memory, allows loading of files and allows you to exit to basic.

Type in the program from the September issue, make sure it's working okay then save it to tape or disc. Alternatively send me a stamped addressed envelope and 50p (for a cassette) and I will send you a copy of the program.

Next load your monitor program and type the command to load a file and load the picture shown with Koolha Painter. Don't forget the reversed heart symbol at the beginning of the name.

Now type in the command to copy a block of memory. The block to be copied is from \$0000 to \$7F2F and is to be copied to memory starting at \$3000. Now exit the monitor back to basic and load the main dump program. When loaded, type `Open4152` and you will see your picture. Full instructions for the screen

dump program are given in the September 18 issue.

I hope this is of some use to all the frustrated artists out there who would like to see their work in a hard copy form. Incidentally, if anyone is thinking of getting a monitor/ assembler for the purpose, I would recommend Zeus, as it is perfect for the job.

Peter Dore  
De Cuirham

## MTX Fanatic

Being a fairly regular reader of the general computing press, I offer your readers a few moments of relief from articles about Amigas or Amstrads.

Having been attracted to the MTX 512 since it's launch, I couldn't resist one at the latest price. Having been shunned by the software houses, it's essentially a hobbyist's machine and was purchased as my third micro.

I agree with your two letters in the Sept 11 issue: it's a powerful beast and is a joy to use, but I must admit to having many disappointments.

Firstly, the manual, it offers far more than usual info to beginners and experts alike, but not to the rest of us in between who understand Basic and are gently prodding the crust of M-code.

The memory map might as well be printed in Japanese. It does not show the addresses of display screens, variables, Basic or Chesswin blocks etc. There are no Galle given and one isn't shown how to access the last 10K (page 7) of Ram, nor how to enter graphics II mode. What great use is the built-in assembler without such info?

The danger of entering M0001 without it being fixed is mentioned, but not explained. The later publication from Phoenix with its countless errors, omissions and misspells as common in lesser 'hand-waggers' (books) was no further help.

I've also been unlucky with the hardware. This is the third MTX in as many months. Mediocre faults, it seems, things like losing eight pixels off the edge of the television on the left side, excessive burn and thick pixels on certain colours and that damned annoying 'light' across the screen every five seconds.

The favourite keys seem superfluous on default they do with one key what can easily be done with two! One can program them to hold extra patterns, etc, but I don't feel they could perform a defined function in the true sense. However, they do retain a changed condition even after leaving.

Compared to Sinclair Basic, the logic is very inflexible. You can't have, for example, `Goto 100 + (50 And A) + (50 And Integ$ = "B")` or if `A` and `Integ$ = "B"` or if `A` and `Integ$ = 0,3` then.

And must apparently follow `IF` and then only between arguments, not conditions. One is forced to use `ELSE` by way of compromise. Fortunately one doesn't need the `IF` statement and cumbersome `IF` `THEN` or `IF` `THEN` as the MTX equals Sinclair in general string doing.

Justly named is *Mega* or *super*. Without this, there seems no hope whatever of developing simple data manipulation programs, which by necessity store the data in arrays in the variable file.

Due to what must be one of the biggest design 'load-ups' in computing history, all variables are cleared every time a program line is entered. I wonder why Marnotach found this great sacrifice necessary?

Loading is like the old ZX81 where either the whole program is loaded or totally skipped out, skipped it is just as finicky about signal levels, too, but without the added loading times in the display to act as a guide to signal level.

Sound and graphics, though, are really something else. In Basic their resolution almost equals that of some Spectrum M-code, and the recently used *graphics* *Music* *Music* could I am sure, be quite acceptably produced in MTX Basic!

No doubt, as I gradually discard my 'hacking' sign on this MTX, I might discover more little quirks. Perhaps by then also, I might discover how to access the *Speedator* Rom to interchange other similarities than those provided on *Gamestar* 2.

All this said, the MTX is one half of a machine for the money.

G Payne  
Sharnley  
Herts



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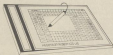
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# Hard work and miracles forecast

**F**orecasting—comes from the Amstat table, publisher, of numerous other statistical packages for home users. This particular package deals with aspects of multiple and linear regression analysis—so why isn't it called Regression Analysis? The answer is that unlike many statistical techniques which have a largely technical or scientific application regression is a means of studying trends in data and the possible users are too widespread for it to be limited to specialist applications.

It can be argued that regression analysis is, or should be, an important tool for any business interested in making predictions about

*"It can be argued that regression analysis is an important tool for any business interested in making predictions about sales, etc."*

sales, etc., or that wants to find out which components of their business strategy seems to be contributing most or least to their success.

To help reduce costs Amstat manuals are usually rather brief. Beyond teaching the mechanics of the program you are just pointed towards suitable textbooks for more detailed information on the very different tests work. Fortunately, bearing in mind the possible lack of training and

heavy demands on the time of business users, Forecasting is accompanied by a very clearly written and easy to follow manual which succeeds in being both educational and practically oriented.

The result is that within about half an hour you can perform extremely complex computations on your data with only a few simple keypresses.

As with any statistical package the quality of the

results really depends on the value of the data you are able to enter and forecasting cannot be expected to provide magic answers without some hard work on your part. However on the whole this is probably the strongest Amstat release yet, high powered tests at extremely low prices and backed up by much improved documentation.

**Tony Handley**

**Program Forecasting Micro**  
Amstat CPC/PCW  
Price £29.95 Supplier S.  
C. Coleman, 33 Lonsdale  
Road, Abbey-de-la-Zooch,  
Leeds LS6 5DA.

# Switching back and forth with K-Switch

**W**ouldn't it be lovely if your micro could do two things at once? Well, K-Switch doesn't offer that facility (you can't turn a 520ST into an Amiga for £29.95... yet) but it does allow you to load two programs simultaneously and switch from one to another as desired. This can be incredibly useful if you want to transfer information from a data base to a word processor or a spreadsheet or whatever. For my particular musical interests, applications could include switching from a sound editing package to a compositional package, and so on.

The obvious limitations are there—K-Switch divides the micro's memory in half and so you won't be able to use it with anything which takes up the whole memory. Presumably on database-type applications you'll find that the program could run out with the total capacity artificially limited.

For many of the Ramdis packages, such as K-Speed and K-Graph, work happily together using K-Switch, so at least you know where you are with those. For your own combinations, you'll just have to use "File Show Info" to ascertain how many bytes a program or disk uses up, and perhaps get the retailer to check that your two favourites

programs will run happily together.

When running K-Switch, you'll find that the operating environments for the two programs remain independent, so changes to screen mode or keyboard repeat rates for one program do not affect the other. K-Switch includes a special common Ramdis facility, since a Ramdis (an area of memory simulating a disk drive but with much faster access times) used in one program would not normally be available to the other program running with it.

K-Switch is installed from the desktop with no programs running, and you simply depress both Shift keys and Alt to swap programs, which takes about 1 second on a 1MB machine. Options include setting the size of the Ramdis (with an indication given of the amount of memory remaining for the other program) and these options are saved as default values. You can choose not to install either the Ramdis or the Switcher, but you must install them together if you want to use them together.

K-Switch also allows you to save the current file and its environment into one file, so you can "put away" your word processor with its current piece of work if you have

to leave it to go on to something else. This function is labelled "Save Work-session".

The Ramdis can be saved as a single block too, and you can disable the "Verify After Write" function to double saving speed—If you want to take the added risk of disc errors getting past the system.

Because K-Switch will generally remain loaded if one of the programs crashes, it can help you to examine "bug-ridden" programs and allow you to reload a previous work-session over a crashed program. You can remove the Switcher (and Ramdis if you like) at any time, but it's not possible to remove the RAM disk alone once it has been installed with the Switcher. A good selection of warnings keep you up to date as to what information will be lost if you do this.

K-Switch doesn't take much account of peripheral activity and so shouldn't be used in the middle of printout, disc transfer or NEC32 sessions—as we've mentioned, there will no longer be any activity in the de-selected program. You can't use K-Switch with any program on a "boot disc" as K-Switch is removed if the system is re-booted. K-Switch itself uses just 194 191 bytes.

Overall the usefulness of this program will be defined by your exact applications for it. In some ways, it's quite the opposite. It is "even better than having two machines side by side", since the Ramdis speeds up data transfer so much if you are already working with K-Speed, K-Mail or K-Graph and find yourself loading and unloading software all the time. £29.95 is a small enough price to pay for the saving in time and increase in efficiency which you can make.

**Mark Jenkins**

**Program K-Switch Micro**  
Amiga 520ST/1040ST  
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# Consolation for the games player

John Cook chronicles the return of the console

**Q**uote: "And those that shall come first shall come last," etc. Obviously not! In the home computer market? Oh yes, this Christmas (eventually) and next year (for sure) dedicated games consoles may well overtake home computers as far as straightforward entertainment purposes go. And how strange that will be.

Remember back in the mid-seventies? Even before the ZX 80 was a gleam in Sir Clive's bank account? Do you remember the games consoles? Those glorious days of the Intimate, Atari and Intellivision. Those days when you mortgaged your house to buy a console, then mortgaged your car to buy the cartridges and away you went... black graphics and all. It takes all sorts, but I will know people associated with a fashionable programming house that owe to the Atari cartridge version of Defender. However, it's no secret why the dedicated consoles eventually lost out to the hybrid computer/consoles, and then to the full blown computer last.

After all, you can't do your word processing on a console, or hook up to Prestel - and paying out £30 or so for several games packed into a cartridge was far from an inexpensive business.

In short, the question was, why pay for an affordable, technically inferior system, when you could buy a home computer? People voted with their wallets and the rest is history. Yet, the fact is, this week sees the official announcement of one major games console (the Sega Master System, marketed in the UK, Germany and Holland by Aristonsoft) and two more

consoles (the Nintendo and the new Atari) will be out fairly pretty soon after. So what's changed?

## That's entertainment

The fact is, the home computing market over the past three years has slowly polarised into two camps - the games players and the buffs. Games players use their computers, usually low-end machines, almost primarily as programmable consoles. Plug in the joystick, load in the games and away you go, whereas the buffs (often with more expensive ma-



chines or peripherals, while often using the thing for constrained purposes, will spend a great deal of their time seriously programming the thing, or using it for some other purpose.



While being totally adequate for the latter function, almost all home computers don't act very well as simple arcade consoles. The need for a keyboard, interfacing, considerable amounts of on-board Ram, etc. and the lack of advanced graphics chips, games oriented hardware routines plus, in some cases, something as elementary as a joystick port, mean that almost all low cost machines don't come up to scratch. And the chore of wiring for your favourite game to load and the case for a dedicated console wants to take off. Enter the Sega Master System.

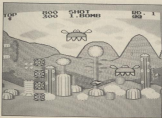
## The Master System

Sega, in case you didn't know it, is a Japanese multi-national which happens to be one of the world's leading manufacturers of dedicated coin-op arcade machines, such as Space Harrier and Enduro Racer. The Master System package consists of the main unit, the power base and two control pads - together with an AC adaptor and a game on Sega Card, called Tanabata. But perhaps, the most interesting thing about the Sega is the price - £59.95. And that's pretty cheap for a system that manages to deliver arcade quality games for more consistently than most home computers.

## Hardware

At present, very little is being said about the detailed hardware spec - partly, no doubt, because of ignorance, partly through ignorance, as there are only three machines in the country. However, it can be revealed that the main cpu is a 280A running at 3.4MHz with 8K of Ram and 10K of video Ram. However, the outstanding asset of the machine must be the custom video chip - renowned to be the same as that used in the stand-alone Spy Hunter machine.

This allows 32 colours to be used at one time (there is a palette of 64) with a screen resolution of 256 x 192 pixels - compare that with 16 colours and 320 x





200 resolution on an Atari ST (driving a normal telly) and it doesn't come off badly. Hardware sprites, 32 on a single screen from up to 256 and hardware scrolling routines mean real business as far as sheer 'em ups go. Sound isn't neglected either with three four-voice sound channels and white noise generator for those really nasty explosions.

Naturally, connections to the outside world are few. One port for cartridges on the top, one slot for cards on the front. On the back it's one output for the TV, one A/V (audio/visual) socket that'll connect up to an RGB monitor or telly if you prefer a few extra decibels, together with the obligatory power in and a weight that'll change the output from VHS channel three to channel four. Power on/off, system reset and pause switches finish the line-up – apart from two ports where you plug the controllers in.

These controllers are mini-joysticks with two independent fire buttons and are small enough to hold in the palm of your hand.

The games, of course, are the real

object of the exercise and at the moment you have right to choose from – two on Sega Card, *Thunder* and *Hungry*, with six on cartridge: *Black Belt*, *Fantasy Zone*, *World Grand Prix*, *Chapflier*, *Action Fighter* and *Ashe Warrior/Ho Po*, all going at £19.95. The difference between the cards (looking similar to Astro-type cards) and the cartridges are said to be memory size, cards weighing in at 32K and cartridges starting at 128K. That's a lot of game. Let's start with *Thunder* – bundled with the system.

*Thunder*, the most of the games on offer, isn't going to tax your intellect, but has pretty damn smooth right-to-left scrolling and plenty of colourful sprites to shoot the hell out of. Instructions are written in hilarious English translation, but the plot is standard – save the earth from the alien stuff, with the added bonus that you can transform your CA-314 meter into all sorts of deadly devices.



The graphics from *Ashe Warrior* were the inspiration for Andrew Boybrook's *Ultimate* – but see *Pinhead*'s *Wahnead* for a much inferior version of this vertical scrolling blaster.

*Hungry* and *World Grand Prix* are both fairly straightforward racing games – one motor bikes, the other cars, while *Black Belt* is a cross between *Je Je Kung-Fu* and *Kung-Fu Master*.

The best straight arcade conversion is probably *Chapflier*, which has you repelling hostages by helicopter – a classic that is done proud here, but awards for the waitlist game go to *Fantasy Zone*. Put on the sunglasses and away you go in outrageous day-glo. Interior designs will be driven insane by the colour combinations used in this one. And finally *Action Fighter* – the title that outrageously plagiarises almost every coin-op you can think of, from *Defenders* onwards, but has enough in it to keep you blasting for weeks.

## Conclusions

Put simply, the new generation of games consoles – Sega, Nintendo and Atari – can do straight off what it has taken four years to get anywhere near on the Spectrum; that is, superb multi-colour zapping. Only the Commodore 64 comes anywhere near this standard and then only rarely, with titles such as *Summer Games* and *Ultimate*.

They will never replace home computers as far as strategy or adventure games are concerned – but they mark the beginning of the end for the low end PCs which are primarily marketed as games machines – and that has some pretty profound implications for a large chunk of our industry.

The cons are the usual – software support, reliability and so on. By the middle of next year there will be at least three competing machine standards and you might be wise in deciding to wait and see which comes out on top. But as far as this Christmas goes, Sega looks like it's the only contender in the shops.

Another quote: 'I have seen the future.' And let me tell you – it's fast and very, very loud indeed.







# The quest for the perfect adventure magazine

*Tony Bridge assesses some of the multitude of fanzines*

I've been a few weeks since I looked at magazines for and by adventurers, but that hasn't stopped them flooding into the office. I'm glad to see that there is still such enthusiasm for adventures, even though arcade games (and so-called adventures) seem to be getting a stronger hold than ever over the software market.

Tony Touchwell's name crops up in a lot of these fanzines, and now I've finally seen more copies of his own efforts, *The Questline Chronicles*; or rather, the efforts of Tony and several (at least a dozen) helpers. I'm sure that these affairs work better when the workload is shared — after all, no-one can hope to be an expert on all aspects of the hobby.

In this case, the partnership works well, with *D&D*, *Heroic Releases*, *Infection* corner and *Darkmark Action* (devoted to

*"The aim of the club is to help frustrated adventurers from ending up in an asylum going mad with problems in adventures"*

the aforementioned adventures of course) all being looked after by individual contributors. With these departments being supplemented by a puzzle page and plenty of hints, tips and maps and reviews, the magazine is packed with plenty for everybody.

The earlier small format of 48 some pages (looking very much like its friendly

rival, *Questline*, one of my favourite fanzines) has given way to large text on a similar number of large pages, which is not as attractive, but at least no information seems to have been lost in the process.

The main magazine is sent out every two months, and there is also a monthly newsletter (haven't I said this one, though, all this plus the usual helpline service for just £8 a year. Although the magazines are well-illustrated and the maps and solutions are well worth having, I particularly liked the reviews. They have a good rating system and seem to be well-reasoned and not afraid to point out bad as well as good points.

The aim of the club and magazine is "to help frustrated adventurers like ourselves from ending up in any asylum due to the fact that they are slowly going

## Adventure Helpline

**Zork 1 on Commodore Plus/4.** What do I do in the shaft room? How do I get into Hades — if I need to, that is. Mrs Haydon, 25 Town Meadows Drive, Stalford, Beds SG17 5EP

**Spillerman on Commodore 16.** Can't make map fluid. I have found baby formula and chemicals and need mixing. David Hawthorn, 21 Goscoe House, 52 Spenshoe Street, Leicester LE2 5TL

**House of Doom on Spectrum 48K.** What is the beautiful woman for? Where can I find long leg and strip and number to open safe? Delta Castle, 88 Oakfield Road, London E 17 5NN

**Finders Keepers on MSX.** How do I escape from the castle of apocaland? I've entered 21 rooms in all. Paul Clough, 101 Cathedral View, Newbottle, Houghton-le-Spring, Tyne & Wear, DA4 4HH

**Macbeth (2) on Commodore 64.** How do you raise the drawbridge? What do you seek in the sticherman's room? Michael Bradley, 111 West Avenue, Melton Mowbray, Leics LE13 0JH

**Hampstead on BBC B.** Where is the Old Wythehamist tie and how do I get it? Damon Jones, 38 Long Reach Road, Cambridge CB4 1UG

**Shadow of the Unicorn on Spectrum.** Any help at all, please! K W Adam, 19 Navens Street, Dundee DD5 2TW

**Seabass Delta on Spectrum.** How do I use the Spanish mauler? How do I keep the sliding doors open? Brent Norris, Rams, St Martins Close, Keved, Trarbridge, Wiltz BA14 6NL

**See-Kee of Anash on Spectrum.** Where is the casket? Where is the blowpipe? How do I get the red of light out of the block of ice? Brent Norris, Rams, St Martins Close, Keved, Trarbridge, Wiltz BA14 6NL

**The Pawn on Atari ST.** How do I escape from the maze of featureless rooms? Andrew Jones, 4 The Ridings, Warrington, Warrington, Suffolk SP04 2GL

**Zhal on QL.** Where do I blow the horn? Where do I pick up the sword without Tazelon taking it from me? Where are the bow and arrow? Andrew Norris, 25 Farmer Street, Barnsley, South Yorkshire S70 8RS

### Adventure Helpline

Getting confused? If you are stuck in an Adventure with nowhere to turn do not despair — help is at hand.

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lem, send it to us, and a fellow adventurer may be able to help.

Remember — this system only works if these adventurers who have solved the puzzles get in touch. Every week in *Save An Adventure Today (SAAT)* issue!

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mad with various problems in their adventures". I know the feeling well!

Questions can be reached at 34 Crossgates Ring Road, Leeds, WY Yorks LS1 8BZ. (This address is actually that of Joan Thomas, who is responsible for the excellent Puzzle Corner and not the subscription department, but she will pass your enquiries on.)

In Popular, June 28, I mentioned the Spectrum Adventure Exchange Club. William Young of SAEC has now brought me up-to-date on activities there. Of special interest is a computer-based magazine called, naturally, Spectrum-Adventure, and contains everything you'd expect including news, reviews, tips and so on. Although tape-based magazines have been with us for some while, this is the first that I know of devoted to the hobby of adventuring, and a mixed bag it proves to be. The tape contains several programs: the usual magazine-type of things, such as letters (from the ubiquitous Jane Farrow), reviews, competitions, adverts and so on - and also an adventure. It's a serial, now at its third instalment, called Space Odyssey. Although it is standard Galt's law, there is a lot of atmosphere in the rather brief descriptions, and most inputs get an intelligent response - obviously a lot of thought has gone into constructing the storyline.

Also on the tape is an apperance by The Bird and The Batting who seem to be

the dual personas of one John Wilson, often mentioned in the Corner, and provider of much resident over the years (as well as being the writer of the Bight; no, not that one, but the other one mentioned alongside ORL's a couple of weeks back - John's is now re-titled *The Crystal Story Of A Seeker Of Gold* and available from him, costing a mere £1.99, at 28 Spensard Topp, Congate, Rochdale, Lancs OL12 7NR, and worth every penny. The format here seems to be a review followed by hints and tips, having had first-hand experience of John's encyclopaedic knowledge of Spectrum adventures, I was disappointed that these tips amounted to a mere handful of exercises, a major opportunity lost for a full-scale run-down on the tough games from a real expert.

There's a lot on the tape as you can see, and the adventure makes the whole thing good value; but I feel that the computer could have been used to more effect - and more hints and tips would have been welcome (and maybe an on-screen map or two). However, the magazine is well-presented with (minimal) no spelling mistakes and some attractively re-designed character sets (and the best from Prosim's graphics utility). Each issue is £2, though you may take out a subscription for a hefty discount of 25%. You can write to SAEC at 4 Kilmartin Lane, Carlisle, Lancashire ML9 5RT.

Carol Moore will be well known to

adventurers for its adventure-writing editor for ORL, Genesis. It has recently started as Camelsat, mostly for adventurers, it is now attracting members with more general interests. Weighed towards Amstrad users, there is now the first plating page for everyone. There is page after page of technical advice, writing in Basic, how to write and solve adventures, jokes for arcade games, special offers, letters, hints and tips and all the rest. Possibly of more interest is a scheme for adventure-writers to join together in an effort to duplicate and market games. The monthly newsletter is £1 per issue (a bit steep), or £9 for 12 issues (a bit better).

Camelsat is at Weltpark, Wilby Avenue, Glaston, Devon.



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# SO WHAT'S NEW IN LLAMALAND (HANTS)?

JEFF MINTER, our long-haired Peruvian Correspondent is off to the land of INCA COLA once again...

## LEAVING A FEW SOFTWARE ARTIFACTS BEHIND...

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For the C64 16

- **MATRIX & LASERZONE** - two classics re-written for the C16. **MATRIX** includes all the features of the original version including that historical triumphed the British plus it's hard to take an even faster fire rate than the original! **LASERZONE** is unique disk of independently controlled laser boxes has never been seen to control for as you learn its subtle things get rougher and tougher for those pesky aliens! - published jointly with ARIGLASOFT £8.95 - both games on tape.
- **VOIDRUNNER** - The new, map-blasting sequel to **DRIDRUNNER** and **LASERZONE**, lots of wacky heads of chaos and lots of disintegrated alien flying everywhere in the fastest blast to hit the C16 - and on the far side of the unassisted you plan to include the 16 version of **HELLGATE** - a shoot-em-up for those with superfast reflexes and independently controlled available.  
- coming soon from LLAMASOFT, with ARIGLASOFT.

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## AND ALL THIS

- **VIVA VIC!** is our VIC collection - 8 of JEFF's stuff for the good old machine. Great stuff for VIC owners! **ADDACTOR**, **TRAXX**, **MATRIX**, **HELLGATE**, **LASERZONE** etc. £8.99, all on one tape.
- **YAK'S PROGRESS** - the best of Jeff's 64 stuff, includes 8 games, some now default to get commercially - **ATTACK**, **5 REVENGE OF THE MUTANT CAMEL**, **ANCIPITAL**, **SHEEP IN SPACE**, **HOVER BUNNY** etc.  
can't check it at £9.49 (2 tapes) or £11.95 on disc

~~~~~

## AND LIGHTSYNTHS TOO

Another string to JEFF's bow is his work on our **LIGHT SYNTHESISERS** which allow the computer user to play his machine like a **LIGHT PIANO**.

The original Lightsynth, **PSYCHEDELIA**, is also available for most home micros, now £4.00

**COLOURSPACE**, its successor, has been published for the **ATARI 8-bit** micros (only on tape £7.50, the **BBC B** (tape, £7.95) and its spectacular 16-bit form for the **ATARI 520 ST** (£19.95).

**FUTURE** After the Peru trip the Atari ST is due for a bit of painting - a new project is planned which should be totally **EXTRAC**. Suffice to say that **COLOURSPACE** colours should expect something interesting in 1987...

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# Poking around in Knight Tyme

Tony Kendle brings you the latest readers' tips for this game and more



Last week, I had the chance to visit Gargoyle Games in their Tipton HQ to catch up on the latest developments with the superb *Faster Than Light* range. The Spectrum version of the superb *Light Force* is of course in full swing, deservedly making an impact on the charts and the Amstrad version is just out. Anyone who hasn't bought a copy yet must be mad – the game is a masterly piece of programming by Roy Carter and is wildly addictive.

The Spectrum version caught everyone's attention for the almost unusual way it seemed to defy attribute clashing problems yet still pack the screen with colour. The Amstrad version is just as clever in a more subtle way – the quality of the scrolling and the action that goes on is difficult to achieve on a 16k screen but it's been done with such style that it's easily the best shoot-up I've seen on the machine.

The Commodore version is being completed now and no doubt will again pull out all the stops. The second FTL game *Shakedown* is likely not to appear until after Christmas but the team is confident that it is going to be superb.

Now then, I have an apology to give to Tracey Rogers of Oldbury for delaying this piece for help but she has landed in a terrible fit in Romantic Robot's *Wiggler* and desperately needs pokes or some foolproof tips for this game (Spectrum version). I'm sure that it wouldn't be beyond the ability of some of our more accomplished hackers to get into this game and send me the details to end her distress.

Stuart of Heywood has written about the Jet Set Willy pokes which we published for the BBC some weeks ago – which is in fact only for the tape version of the game. If anyone can produce a poke that works on the disc version we will be very pleased to hear from you. Anyway, Stuart has kindly sent in a poke of his own for endless lives on the BBC game *Thrust*. The poke doesn't stop you from losing if you run out of fuel.

Now then, to start on the huge pile of *Atlap* *Knight* pokes and tips that we have collected over the last few weeks. Before concentrating on *Knight Tyme* I'm sure that we should really clear the decks regarding *Spellbound*.

Especially for Paul Bakley of Liverpool, here at last is a full solution to the difficult

*"The Spectrum version of the superb Light Force is of course in full swing, deservedly making an impact on the charts . . . Anyone who hasn't yet bought a copy must be mad – the game is a masterly piece of programming and is wildly addictive"*

problem that everyone seems to get stuck on about half-way through the game.

David James writes: "This is one of the most complex parts of *Spellbound* as it involves three main actions to be performed as a result of reading two quite cryptic clues. The clues are both in the Crystal Ball and are, 1) The Taro Card meaning Death, destruction and the demolation of grids, etc, and 2) a noise and a religious book written in Hebrew etc. Clue 1 is the interpretation of the Taro card 'The Lightning Storm Tower' – get Thor into the lower room and ask for help. The tower will be struck by lightning causing The Wall to be weakened elsewhere in the building.

Clue 2 is a reference to the Old Testament and the Walls of Jericho.

continued on page 20

## Charts

### Top Twenty

|    |      |                      |                   |
|----|------|----------------------|-------------------|
| 1  | (1)  | Paperboy             | Elite             |
| 2  | (8)  | Trivial Pursuit      | Demonik           |
| 3  | (2)  | Lightforce           | Faster Than Light |
| 4  | (4)  | Thrust               | Finalist          |
| 5  | (6)  | Ninja Master         | Finalist          |
| 6  | (5)  | Dan Dare             | Virgin            |
| 7  | (3)  | Go for Gold          | Americana         |
| 8  | (-)  | 1942                 | Elite             |
| 9  | (9)  | Dragon's Lair        | Software Projects |
| 10 | (-)  | Olly and Lyle        | Finalist          |
| 11 | (-)  | Green Beret          | Imagines          |
| 12 | (-)  | Kaj Temple           | Finalist          |
| 13 | (-)  | Ghosts and Goblins   | Elite             |
| 14 | (-)  | The Great Escape     | Ocean             |
| 15 | (-)  | Strike Force Harrier | Microsoft         |
| 16 | (14) | ACE                  | Cassini           |
| 17 | (3)  | Druid                | Finalist          |
| 18 | (12) | Videos Poker         | Mastertronic      |
| 19 | (-)  | Board Square         | Finalist          |
| 20 | (-)  | Super Cycle          | Egypt/US Gold     |

All figures compiled by Gallup/Micromaps



# Games: Arcade Action

4 continued from page 18

Give the Tronnet to David Haffelton and get him to the room with The Wall. Ask for help and David will blow the wall down. As well as having more rooms to explore the new sections of wall can be stood on.

Take these back to the tower and give them on top of each other and you will have enough height to get over the tower.

Here are one or two other clues that we only gave in a cryptic form. Lady Romaine should be given a laser to go with her face. She will then blast through the wall at the entrance to the secret passageway in the room where Thor's hammer can be found.

Seroun has to be given a javelin and he will then throw the lamp of platters into the pit to act as a stepping stone.

The broken glass will act as a magnifying glass on the small writing on the engraved candle.

Richard Fairhurst of Gotham has sent in a version of his memory searcher program that he has used on the Armistead copy of Knight Time. Richard writes, "I thoroughly enjoy playing Knight Time, which is probably my favourite Armistead game. Using the program I found so many tips and treasures that I couldn't begin to list them all.

But this program and last Knight Time from the start. When it has loaded prints any key to start the memory dump.

The space bar will paste it so you can write the messages down. Memory has obviously been saved by using lower case letters instead of commonly used words or part words.

is memory dump  
28 LOAD "T0000" SAVE  
30 UNDO 98070- " " 98000 000  
32 FOR N=0 TO 255  
34 FOR I=0 TO 255 MOD 128 IF P=31 THEN NEXT  
36 IF I=0 THEN " " THEN UNDO 98070- " " 98000 000  
38

UNDO 98070- " " 98000 000  
38

"The program can be adapted to run on Amiga's Rastex by changing Line 28 to Line "X" 8241."

Over the next few weeks we will have more tips and help for the Magic Knight games including a few details about the latest program from David Jones, and news about what is going to happen to those T-shirts.

## Thrust cheats on BBC

1880R 00 J.C. Smith  
28 REM Dave Addison &  
30 Davies  
32MODE7  
40PRINT "CH4130:CH4157"  
42CH4152:"Infinite men?"  
44CH4155

58R=000  
60FAN="W"12=0:00T000  
70FAN="T"13=1:00T000  
8000T000  
90LOAD THRUST3  
1000F 13=1 THEN 70:2012=0  
110GOTO 60433



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# The Great Escape: love it or hate it

Each dawn I die, as the saying goes. Like bundles of logs, haggard men with dead eyes shuffle across the bare boards of the freezing huts. There was a time when the sight of these beyond the bars fired their souls with hope, but now they don't look at the window: they stare at their feet or glare at a dry crust of stale bread.

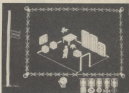
But enough of this everyday tale of prisoners' down on their luck - let's take a look at *The Great Escape*. Ocean's Colditz-style bid to appeal to stout-thighed soldiers. It's a curious program, a sort of *Flight* meets *Long Walk*, set in a Second World War German prison camp.

Yes, Major Steve McQueen, have been incarcerated for the duration and must endure the tedium of prison camp life while at the same time putting together

the necessary equipment to escape. You and the other prisoners are represented by the aforementioned bundles of logs, generally shuffling around aimlessly, while the camp is also peopled by grizzled guards and the commandant.

The most interesting thing about the program is the way the play is structured. Each day in the camp has its routine, starting with roll call, then breakfast, then exercise time and ultimately bed, and if you leave your character to his own devices he'll follow this. So while you can go where you want you have to judge when you do this carefully, nipping in and out on the way to breakfast then back out before you're spotted, for example.

The main display is of you, centre screen, surrounded by the rest of the camp you're in, while the bottom and side



shows the state of your morale and general heroism. Morale is shown by a flag, which in my experience tends to steadily drop a pole in response to failed escape attempts (I suppose I need to find the motorcycle). Heroism influences your ability to get hold of various artefacts inevitably going to give you a few if you're LMF) and can also be collected from failed escape bids.

On first impressions it looks as if these could be a lot to the game, but I have a nagging doubt that the tedium could prove too realistic for

some people - does the Great British software buying public really want to hang around at roll call waiting for an opportunity to sneak off, one could ask? It looks like the sort of program you'll either love or hate, so don't blame me if you hate it. Personally I think I could grow to love it.

**Popular Appeal** ♦ ♦ ♦ ♦  
John Lifford WC

**Program** *The Great Escape*  
**Mean** Spectrum **Price** £7.95 **Supplier** Ocean, 6 Central Street, Manchester M2 5NS.

# Pretentious and galvanising Galvan

As the last surviving member of Pretentious Organisation Inc you are sent to the Gaverns of Doom or whatever, in the planet Xanox to eliminate all the adversaries you can lay your paws on. Since these foes are Evil it's obviously an okay thing to commit genocide.

After Catch one is you don't have any weapons in your quest to exterminate these diabolical, rabid and alienic. Catch two is this isn't a martial arts thrash. This puts you in serious trouble until you find some weapons beyond your feeble ability to punch. These weapons appear in the form of power crystals which give you extra power (what a surprise!) and an improved weapon. And then it's killing time as you go in search of things to kill, culminating in the beautiful killing of the Giant Demon at the end of each level.

The graphics are presented in a 3D side on perspective with very colourful backgrounds. The problem is that the background is too colourful and all the foreground objects, your good robotic self

included, tend to blend in, making it occasionally difficult to see precisely where you are.

**Popular Appeal** ♦ ♦  
Duncan Evans

**Program** *Galvan* **Mean** Amstrad CPC, Spectrum **Price** £9.95 **Supplier** Imagine Software, 8 Central Street, Manchester M2 5NS.

# Spies amongst the horses

Dirty doings amongst the racing fraternity mean just one thing - we're on the Dick Francis track! The man who turned the *Sport of Kings* into the *Sport of Criminals* has entered the adventure game.

I'm no Francis aficionado, but the opening of this Rare Jam adaptation seemed faithful to his thrillers in spirit, at least. You start in your house, with a lot to pick up before you answer the incessantly ringing phone. Next leap into your car, roaring off round the home counties, but keep an eye on the petrol gauge if you

want to avoid highway robbery - an AA man with a tow rope.

The presentation is pleasant, with location descriptions appearing above the main communication window. Some objects only appear in the main window though, so watch it carefully. The vocabulary doesn't seem to be that big and the parser becomes confused at times.

The G-side of the tape contains a racing game, in which you study form then place the imaginary money on the automated page.

I fail to see the fun in game

bling an imaginary pony on an imaginary pony, and the inaccuracies of this simulation would make Francis, who is always factually accurate, demand a steward's enquiry.

All in all, your reaction to *Twice Shy* will depend on whether you like its subject matter. If you do, it's competent enough, but if not, you'd better stay away from it.

**Popular Appeal** ♦ ♦ ♦  
John Wilson

**Program** *Twice Shy* **Mean** Spectrum **Price** £9.95 **Supplier** Music Publishing



# The funnier side of Dragon's Lair

**W**anna hear something funny? Remember *Dragon's Lair*, arcade game with groovy graphics, courtesy of several granddads' worth of laser disc? Animation designed by

an ex-Disney artist? Well, here it is on that classic graphics machine - the Spectrum!

Of course, the Spectrum can't deliver the ultra-high-res goods. In fact, to avoid that

old devil attribute clash, *Dark* is a shadow of his former self - a mere silhouette, in-closed. But within the limitations of the machine, Software Projects has done a reasonable job.

They've chosen very episodes from the game, involving running, jumping and sword play, but the only way to contain all of the code in its multi-load, which is aggravating if you're forced to go back to the beginning. This is an ideal case for the full 128K treatment.

I also found the loss of life sequences, where *Dark* turns to a skeleton, then miraculously regenerates, irritating. It may be true to the original, but it quickly becomes tedious.

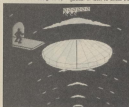
You'll get to see it rather a lot, too. *Dragon's Lair* is difficult. In fact, I'm tempted to suggest that it's too damn difficult. I spent ages attempting

the first section, sliding around a falling disc with four winds blowing, but failed time after time because it requires pixel accuracy.

This is just too much for the first sequence, and without the fantastic cartoon quality, the reward for persistence just isn't enough. If you loved the original, you may want this reminder for your memo. But too much has been lost in the conversion that it's not a classic - just a classic case of attempting the impossible.

**Popular Appeal** ★★

John Minson



## Rogue addicts

**R**ogue is straightforward Q&D type solo dungeoneering on a computer - but the ST graphical ability and the wisped minds that programmed the beast combine to make an outstanding hack and slay job.

You make your way through the dungeons of doom - all 26 levels of them - gaining experience as you fight varying monsters.

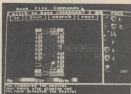
Other things you'll pick up are gold pieces, potions, scrolls, rings, extra weapons, etc.

Not as sophisticated as *Swords and Sorcery*, but considerably more playable and long lasting (different levels are generated each time you play) - this one of mazes, windows and so on make this a near ST classic for the fantasy buff.

**Popular Appeal** ★★★★★

John Cook

**Program** *Rogue* **Micro**  
Amstrad ST **Price** £34.95  
**Supplier** Epya, via Solus Shop, 1-4 The Mews, Harbottle Road, Siskup.



## Mediaeval adventures

**T**hose of you familiar with the Court of King Arthur will no doubt be eager to buy Camelot Warriors, Analech's faithful reproduction of knights, questing beasts, Holy Grails etc.



Well of right, maybe there weren't any poison kingfishers at Camelot. Or killer pigs. Or man-eating plants. Pop-tart's kid brother or electric eels. But the facts does look like a knight - until he turns into a frog, that is.

You'll have deduced from the above that Camelot Warriors is a somewhat free interpretation of mediaeval armoured warfare. It is, however, a colourful, frustrating and engaging arcade game.

It's split up into four worlds constituted out of swirling platforms, and you must retrieve four items from the 30th century - including a light bulb and a TV - which have somehow got mixed up in them. Controls are simple, just left, right, jump and fire (use your sword) and while it's not fast you need split-second timing to survive.

This could, however, prove to be a problem for players, as overcoming obstacles involves precise timing.

But although I feel it could equally be a bit less rigorous it does have a certain addictive quality, and if you don't mind being driven mad it'll keep you occupied until the sun comes.

**Popular Appeal** ★★

John Lattice

**Program** *Camelot Warriors* **Micro** **Amstrad**  
**Price** £9.95 (ape), £14.95 (box) **Supplier** Analech, 85 Long Acce, London WC2.



Programming: BBC

## Jetmode

02/07/2005

Type in and run the listing. Then, after correcting any mistakes, save the code with "Save O\_Absolute" (900-100-900).

The following are the names of the

sixteen like those seen in Jet-Pac and Sky-4ac, which are compacted to leave more memory for the program. To use Jetcode, use the following command:

4%-mode number (2-5 or 6)  
 7%-screen width (in characters)  
 7%-length of screen (in characters)  
 FIRMEX-100-5500 will change mode  
 and return the value of screen columns.

The program can easily be altered to find any source as follows:

Don't call the program from within a procedure and make sure there is

enough room for both screen and program size. A Bad Program message will result.

Although temporarily some  $\text{AgClO}_3\text{-AgF}$  and  $\text{AgO-AgF}$  is also set up in linkage table as  $\text{AgClO}_3\text{-AgF}$  and which must not be confused.

Do not use **WOLFF** as hardware scrolling because it won't work and may ruin your manuscript.

Finally, do not use `MOD4` or `MOD8`. Instead use the window procedures given in *Graphics* page.



1999

19 POST-GRADUATE COURSES  
20 ENGL 10000  
21 FRENCH 10000-10100-10200-10300-10400-10500

```

40 NEXT
50 REMARKS: THE POSITIONAL
an error at the holding
60 LINE=1
70 NEXT
999 END

```

|      |      |                                       |
|------|------|---------------------------------------|
| 1010 | 2474 | 623,977, 682,977, 684,178, 6235       |
| 1011 | 2474 | 623,989, 683,989, 685,089, 6238       |
| 1012 | 2474 | 685,989, 686,989, 617, 686, 686, 6239 |
| 1013 | 2474 | 686, 91, 687, 687, 687, 6240          |
| 1014 | 2474 | 687, 687, 617, 687, 687, 6241         |
| 1015 | 2474 | 64, 68, 64, 617, 617, 6242            |
| 1016 | 2474 | 677, 624, 624, 64, 64, 617, 6243      |
| 1017 | 2474 | 646, 626, 626, 617, 626, 626, 6244    |
| 1018 | 2474 | 627, 627, 617, 627, 627, 6245         |
| 1019 | 2474 | 624, 624, 617, 624, 624, 6246         |
| 1020 | 2474 | 624, 624, 617, 624, 624, 6247         |
| 1021 | 2474 | 624, 624, 617, 624, 624, 6248         |
| 1022 | 2474 | 624, 624, 617, 624, 624, 6249         |
| 1023 | 2474 | 624, 624, 617, 624, 624, 6250         |
| 1024 | 2474 | 624, 624, 617, 624, 624, 6251         |
| 1025 | 2474 | 624, 624, 617, 624, 624, 6252         |
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| 1033 | 2474 | 624, 624, 617, 624, 624, 6260         |
| 1034 | 2474 | 624, 624, 617, 624, 624, 6261         |
| 1035 | 2474 | 624, 624, 617, 624, 624, 6262         |
| 1036 | 2474 | 624, 624, 617, 624, 624, 6263         |
| 1037 | 2474 | 624, 624, 617, 624, 624, 6264         |
| 1038 | 2474 | 624, 624, 617, 624, 624, 6265         |
| 1039 | 2474 | 624, 624, 617, 624, 624, 6266         |
| 1040 | 2474 | 624, 624, 617, 624, 624, 6267         |
| 1041 | 2474 | 624, 624, 617, 624, 624, 6268         |
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| 1048 | 2474 | 624, 624, 617, 624, 624, 6275         |
| 1049 | 2474 | 624, 624, 617, 624, 624, 6276         |
| 1050 | 2474 | 624, 624, 617, 624, 624, 6277         |
| 1051 | 2474 | 624, 624, 617, 624, 624, 6278         |
| 1052 | 2474 | 624, 624, 617, 624, 624, 6279         |
| 1053 | 2474 | 624, 624, 617, 624, 624, 6280         |
| 1054 | 2474 | 624, 624, 617, 624, 624, 6281         |
| 1055 | 2474 | 624, 624, 617, 624, 624, 6282         |
| 1056 | 2474 | 624, 624, 617, 624, 624, 6283         |
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| 1066 | 2474 | 624, 624, 617, 624, 624, 6293         |
| 1067 | 2474 | 624, 624, 617, 624, 624, 6294         |
| 1068 | 2474 | 624, 624, 617, 624, 624, 6295         |
| 1069 | 2474 | 624, 624, 617, 624, 624, 6296         |
| 1070 | 2474 | 624, 624, 617, 624, 624, 6297         |
| 1071 | 2474 | 624, 624, 617, 624, 624, 6298         |
| 1072 | 2474 | 624, 624, 617, 624, 624, 6299         |
| 1073 | 2474 | 624, 624, 617, 624, 624, 6300         |
| 1074 | 2474 | 624, 624, 617, 624, 624, 6301         |
| 1075 | 2474 | 624, 624, 617, 624, 624, 6302         |
| 1076 | 2474 | 624, 624, 617, 624, 624, 6303         |
| 1077 | 2474 | 624, 624, 617, 624, 624, 6304         |
| 1078 | 2474 | 624, 624, 617, 624, 624, 6305         |
| 1079 | 2474 | 624, 624, 617, 624, 624, 6306         |
| 1080 | 2474 | 624, 624, 617, 624, 624, 6307         |
| 1081 | 2474 | 62                                    |

1181 2474 549,340, 504,410, 577,549, 6320  
1182 2474 534,420, 502,577, 549,470, 6229  
1183 2474 53,520, 51,549, 504,570, 6229  
1184 2474 549,30, 549,510, 549,577, 6247  
1185 2474 549,51, 549,500, 549,577, 6250  
1186 2474 549,510, 549,577, 549,51, 6247  
1187 2474 549,510, 549,577, 549,51, 6247  
1188 2474 549,577, 549,510, 549,577, 6250  
1189 2474 549,577, 549,510, 549,577, 6250  
1190 2474 549,577, 549,510, 549,577, 6250  
1191 2474 549,577, 549,510, 549,577, 6250  
1192 2474 549,577, 549,510, 549,577, 6250  
1193 2474 549,577, 549,510, 549,577, 6250  
1194 2474 549,577, 549,510, 549,577, 6250  
1195 2474 549,577, 549,510, 549,577, 6250  
1196 2474 549,577, 549,510, 549,577, 6250  
1197 2474 549,577, 549,510, 549,577, 6250  
1198 2474 549,577, 549,510, 549,577, 6250  
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1200 2474 549,577, 549,510, 549,577, 6250

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```

01 04C=0 04C .AND.PP0001,00,10
JY04C
7004P001
0000 use this instead of rds 04,10
04,10
PP0001000000000000,00,10,10
000000 04,10,10,10

```

$$\begin{aligned} 1199129 &= 1199129 \\ 120791000 - 2^2 \cdot 1000000 &= 119912900 \\ 100 \cdot 1200000 - 1000000000 &= 1199129000 \\ 100 \cdot 1200000 - 1000000000 &= 1199129000 \end{aligned}$$







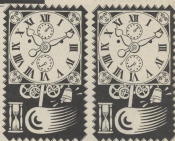
## Slowpro

Michael Riles

**E**ver played games where the action was just too thick and fast? Are your reflexes slowing down with the passing of the years? Well, if this is so then Slowpro is just the ability you require.

It uses interrupts to enable the user to slow down programs to any required speed. Run the program and enter Randomize. Use 85120. Then load up the game you wish to play. Now, pressing 2 and Return slows down a program gradually while 1 and Return reverts the effect. 3 and Return restores the program to its original running speed.

Slowpro will slow down any user of commercial program as long as they don't use interrupts or memory from 85120 upwards.



```

5 CLEAR 65536: LET L=40: FOR I=65536
TO 65536 STEP 8: LET T=0: READ TOT
10 FOR I=0 TO 8: READ A: IF A=999 AM
D F=65536 THEN PRINT " SLOWPRO NOW LOAD
80 INTO MEMORY. SAVE SLOWPRO CODE 85120
110. RANDOMIZE FOR 85120 TO EXECUTE
SLOWPRO": STOP
15 IF A=255 THEN PRINT : PRINT "
ERROR IN DATA ": STOP
20 LET C=0: FOR I=1 TO 8: NEXT I: IF C=0
25 THEN PRINT : PRINT " ERROR IN D
ATA LINE ":L: STOP
30 LET L=L+10: NEXT I
40 DATA 911,62,9,237,73,237,94,201,8
50 DATA 1567,0,255,265,265,197,233,229
,205
60 DATA 1669,123,254,205,206,254,225,2
00,260
70 DATA 1633,241,281,201,63,191,211,25
5,219
80 DATA 1339,254,230,1,203,139,254,201
,62

```

```

90 DATA 1439,247,211,255,219,254,230,1
,203
100 DATA 1662,280,255,62,247,211,255,23
9,254
110 DATA 1401,230,2,202,190,254,62,247,
221
120 DATA 1567,255,219,254,200,4,202,249
,254
130 DATA 888,201,62,8,50,255,255,62,1
140 DATA 1502,39,254,255,201,58,255,255
,254
150 DATA 1297,0,203,220,254,61,50,255,1
55
160 DATA 1780,281,58,255,255,254,255,20
2,220
170 DATA 1507,254,60,50,255,255,201,248
,247
180 DATA 1561,237,73,254,255,11,201,176
,30
190 DATA 948,281,193,241,201,17,0,0,42
200 DATA 1100,255,255,205,201,1,201,999

```

## Programming: Amstrad CPC

### Race Advisor

Nicky Morris

**T**here now follows the second part of this listing for my Amstrad CPC machine.

When entering a horse's most recent results they can be entered exactly as in a newspaper, ie 103 where 0 is used to represent run starting, finishing fourth or worse.

The method used by this program would normally be done by hand but would probably take around three hours for just one race meeting.



If you would like a copy of the program on Cassette plus data for several race courses send £3.25 to 32 Richard Street, Dunstable, Beds LU8 4BH.

Pepper would like to point out that we accept absolutely no responsibility for any monies lost through the use of Nicky Morris's program.



[illegible][illegible][illegible]

## Programming: C64

## Disc Help

Carly Matthews

**P**art two of Disc Help follows along with the instructions for the printer.

Line level sends a carriage return to the printer.

Send One is used to send control codes.

Print sends an ASCII-character string to the printer.

1997

After selecting an option on either menu you may be prompted to enter a filename or string. On some occasions, after the program has checked for error you should press the space bar.

[illegible]



## Programming: C64

```

370 GETN=1:IFN=1 THEN 1370
375 FORK255,1:SYS49152
380 CLOSE1:CLOSE1:RETURN
390 CLOSE1:PRINT:PRINTTAB(1)"" INSERT SAVE DISK, HIT SPACE"
400 GETN=1:IFN=1 THEN 1380
410 PRINT:PRINTTAB(1)"" WRITING 1: ""
420 N=LEN(NH)
430 IFN=1 THEN PRINT " ";N=N+1:GOTO1430
440 PRINTN15," "
450 OPEN 1,8,2,NH+"P,N"
460 FOR K=4216 TO 3
470 PRINTN15,CHR(OFEEK(K));
480 NEXT
490 CLOSE1:CLOSE15:PRINT:PRINTTAB(1)"" COPY COMPLETE, HIT SPACE"
500 GETN=1:IFN=1 THEN 1500
510 FORK255,1:SYS49152
520 RETURN
530 NEW BLOCKS FREE
540 FORK255,0:SYS49152
550 X=10:Y=10:W=20:NH=1:CD=4:GOSUB 270
560 PRINT"";TAB(11):"NEWBLOCKS FREE = ";
570 OPEN 108,8,0,"R,U"
580 FORK=17035:GETN100,0:PRINT
590 GETN100,Y+1:CLOSE100
600 BP=65C(08+CHR(0))+256+65C(Y8+CHR(00))
610 PRINT"";BP
620 GETN=1:IFN=1 THEN 1600
630 FORK255,1:SYS49152
640 RETURN
650 NEW PRINTER
660 OPEN 8,4
670 X=21:Y=8:NH=16:WY=6:CD=2:GOSUB 270
680 PRINT"";TAB(11):"
690 PRINTTAB(23):"LINE FEED"
700 PRINTTAB(23):"FORM FEED"
710 PRINTTAB(23):"SEND CHAR"
720 PRINTTAB(23):"PRINT STRING"
730 PRINTTAB(23):"NEXT PRINTER"
740 PRINTTAB(23):"QUIT PRINTER"
750 GETN=1:IFN=1 THEN 1700
760 IFN="L" THEN PRINTN4,""
770 IFN="F" THEN FORL=1 TO 4:PRINTN4,"" NEXT
780 IFN="S" THEN GOSUB1070
790 IFN="P" THEN GOSUB1030
800 IFN="T" THEN GOSUB1120
810 IFN="Q" THEN CLOSE4:PRINT"";GOTO160
820 GOTO 1750
830 FORK255,0:SYS49152:PRINT"";
840 I=7:Y=3:NH=24:WY=3:CD=3:GOSUB270
850 PRINT"";TAB(11):"FORM NEXT TEXT, PRESS RETURN"
860 PRINTN4,NH:FORK255,1:SYS49152:RETURN
870 FORK255,0:SYS49152:PRINT"";
880 I=7:Y=3:NH=24:WY=3:CD=3:GOSUB270
890 PRINT"";TAB(11):"FORM NUMBER 0-255"
900 W=VAL(NH):IFV=0 THEN 255:PRINT"";GOTO890
910 PRINTN4,CHR(0):FORK255,1:SYS49152:RETURN
920 NEW TEST
930 PRINTN4,CHR(15):"TESTING NORMAL PRINT, ";CHR(13)
940 PRINTN4,CHR(14):"TESTING DOUBLE WIDTH, ";CHR(13)
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## Italics on Spectrum

by Tim Lynes

The following Spectrum program creates an italic character set starting at 84000. Change the value at line 48 to 39 to create a left sloping set. To use the new set enter Poke 23607,240. To allow the set to be copied to another location do the following:

Poke 30004,x-256\*int(x/256)

Poke 30005,int(x/256)

Poke 30015,x-256\*int(x/256)

```
5 CLEAR 20000
10 FOR I=80000 TO 30047:READ A:POKE
  I,A:NEXT I
20 RANDOMIZE USR 30000
30 POKE 23607,240:PRINT "ITALIC
  CHARACTERS !!"
40 DATA 33, 0, 64, 17, 0, 250, 1, 0, 3,
  237, 176, 1, 0, 3, 38, 0, 250, 17, 5, 0,
  126, 203
50 DATA 47, 119, 27, 62, 0
60 DATA 187, 40, 7, 35, 120, 177, 11, 32
  240, 301, 35, 35, 35, 35, 11, 11, 11, 11,
  195, 65,117
```

Poke 20016,int(x/256)

Randomize Usr 30000  
where x is the starting address.

To use the set starting at x,

Poke 23606,x-256\*int(x/256):Poke  
23607,int(x/256):1

To save the new character set enter Save  
"Ita" Code 84000,755.

## Hires Dump

by R Clapp

The following program for our quite forgotten Mrs. T) Amos computer will dump a hires picture to a Brother HPS printer in about five minutes only.

The printing will be slightly compressed along the x-axis compared with the screen because the pin spacing is smaller than the carriage pitch (1/72). Altering the line feed value in line 600 to 7 or 6 will get round this but will also break up the horizontal lines.

```
500 S=40960:S=4096
610 FORC=1TO40
700 LPRINTCHR$(27);"K";CHR$(200);CHR$(1);
800 FORL=S TO E STEP-40
900 B=PEEK(L)
950 IFB=63 THENB=B-64
960 LPRINTCHR$(B);
970 NEXTL
980 B=B+1:E=B+1
990 LPRINTCHR$(27);"A";CHR$(16);
600 LPRINTCHR$(13)
610 NEXT C
```

## Shadow Ram Access

by A W R Crawford

If you've bought an Atari 1000X or upgraded the old 800X, then you may be wondering how to gain access to the additional banked memory that this machine has. Well, this program allows you access to the extra Ram. Type in and run the program, instructions will be printed on screen.

```
10DIM MOVES(70):RESTORE:FOR L=1 TO 70
  READ D:MOVES(L,L)=CHR$(D):NEXT L
20PRINT CHR$(125);POSITION 2,4:FORL=0
  TO 60 STEP 10:PRINT L:NEXT L
30POKE 766,2:PRINT "10 DIM MOVES(70):
  MOVES=";CHR$(34);MOVES;CHR$(34)
40PRINT"20 POKE 842,12:POKE 766,0:PRI
  NT CHR$(125);LIST:END":PRINT "000020"
50POSITION 2,0:POKE 842,12:STOP
60DATA 104,104,133,204,104,133,203,10
  4,133,204,104,133,205,104,104,170,169,0,
  141,14,212,173,1,211,41,254,9,2
70DATA 141,1,211,41,254,9,2,141,1,211
  ,160,255,177,203,145,205,136,200,240,220
  ,204,220,226,202,208,240,173,1,211
80DATA 9,1,41,253,141,1,211,169,192,1
  41,14,212,98
```



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| New Word       | £69.00  | £40.00    |
| Smart Key      | £49.00  | £25.00    |
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**With Kenn Garroch**

## Multiple copies

*Chris Ladd of Harlow, in Popham, writes:*

**Q** Do you know if anyone has made word processing software for the PCW8250 that produces multiple copies of documents? I use my machine to produce worksheets for pupils. Amsoft says there is no facility for doing this within Localizer.

Do you know whether anyone has produced another version of Basic that will run on this machine? I'm not experienced in programming, and I would like something that uses procedures as BBC Basic does.

Has *Popular* reviewed *Microtronic* or any similar ideas processors? It's mentioned in your July 19 issue but I haven't seen it since.

**A** The only word processor that I know will produce multiple copies is *Monitor*, but this doesn't mean that there aren't others. Most reasonable processors will cope with dumping out as many copies as you like.

I remember that there was once a 280-CPM version of BBC Basic available for the Wren and also running on the 280 second processor for the BBC. However, I don't know whether this is still available or who produced it. Maybe they will read this and let me so that I can tell you?

If you want to learn structured programming, you could do worse than use Pascal (available from DR or CSD) as this is even better than

BBC Basic since it was originally designed to be a teaching language.

*Shropshire* has never been reviewed in PCW, but we hope to cover it in a future issue.

## Power struggles

*Al Sykes of Gwent, in Chesham, writes:*

**Q** I have a problem with my Commodore 64. When I switch it on, the power light flashes brightly, then dims and slowly comes bright again. All I get on my monitor is a black screen. I do, however, have a reset switch which I then pressed causes the computer to boot up. After an hour or so, the screen starts doing funny things and the power light dims.

When I try switching on and off, the power light never gets to its full brightness and even the reset switch doesn't work. If I let it cool down, the machine will work but only by the usual method mentioned above.

Could you tell me what is wrong and what, if anything, can be done to fix it?

**A** This sounds as though you have power supply problems. If your power supply is getting very warm, it could well be broken and not able to supply enough power to boot the system. The reset switch works by taking the reset line of the cpu low causing a cold boot. If there is nearly enough power then this will work. After a while though, the power supply gets hot and the voltage it produces drops below the critical level.

The answer is to get your computer looked at by one of the many repair companies now advertising in the various computer magazines like the class-

sified section of *Popular*. What they will probably do is replace your power supply (approx £30) and give the rest of the system the once over, returning it to you as good as new.

## Amstrad rumours

*Mark Manners, of Paeon, Hereborough, writes:*

**Q** I heard recently that due to the release of the Spectrum Plus 2, the Amstrad 6128 will start to take over from the other Amstrad models.

I have a CPC 464 with disc drive and wondered that if I obtained a 64K Rampack, would I be able to run 6128 software. If not, how could I?

**A** As far as I know, the software houses currently produce all their Amstrad software to run on the 464 as the basic Amstrad machine since it will then run on the 664 and 6128 as well. The Spectrum Plus two is reputed to be fully compatible with all Spectrum software so the chances are that software companies will continue to publish for both formats.

The software you will want to use falls into two categories, that running under CP/M and that running under Amstrad. With the former, you should have no problem fitting a Ram pack since this should increase the TPA (Transient Program Area) available in CP/M allowing the 6128 CP/M system to be loaded.

With Amstrad, I am not sure whether Amstrad has changed the operating system on the 6128. The chances are that it has, so fitting the extra memory will not help. However, as I mentioned above, there is no reason why the software houses should change from their policy of producing programs for the 464 as a base machine.

**Is there anything about your computer you don't understand, and which everyone else seems to take for granted? Whatever your problem, Peak & Poke is to Kenn Garroch and every week he will Poke back as many answers as he can. The address is Peak & Poke, PCW, 12-13 Little Newport Street, London WC2E 8LD**

## Screen to screen

*Edward O'Toole of Dublin writes:*

**Q** I own an Amstrad 6128 with a colour monitor. Is there any way I could connect my Commodore 64 to my Amstrad monitor?

**A** Sorry, but I'm afraid you can't. The Amstrad uses an RGB output, the Commodore 64 a composite signal, and the two are incompatible.

## Enter the Dragon

*Rob Baxter, of Whitley Range, Manchester, writes:*

**Q** I recently bought a second-hand Dragon 32 and as I do not own a TV, was hoping to connect it to one of my existing computer monitors.

But so far I have had no success. I have been unable to find a suitable cable and have tried to make one up myself but I cannot find details of the pin layout.

My monitors are the standard Amstrad CPC model and a Ferguson green screen monitor. My main worry is the risk of damaging my monitors, is this possible?

**A** The possibility of damage is always present when messing around with electrical equipment, however, the risks in this case are very slight.

Although the Dragon manual claims RGB output, this was never implemented. The video output is composite video so you're in with a chance on your Ferguson green screen.

Only three pins are used on the Dragon video connector: pin one is ground, pin two is ground, and pin three is composite video. If you can match these up you should get a picture, although sound will depend on whether your monitor has a built-in loud-speaker (many don't).



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# Absolute beginner, intermediate musician or confirmed expert?

Mark Jenkins peruses a selection of readers' tapes

**T**he main problem in writing a column of this sort is knowing where to pitch it — at the absolute beginner, the intermediate musician, or the confirmed expert? The real distinctions as far as equipment is concerned come in three stages, as follows:

1) The beginner with a standard micro and enough interest in music to buy a software package to use the micro's built-in sound chip.

Examples of products aimed at this level of interest are Partridge's *Defendant Music System* on the C64, BBC or Amstrad, the Ritor packages for the MSX micros which are looked at a few weeks back, and many more pieces of software in the £10-£30 range.

If you're pleased with the bleeps and bloops your computer can create, but would like to have them louder/faster/longer/more powerful, the intermediate stage of interest is as follows.

2) The amateur musician with enough cash and interest to want to expand the micro's hardware with a real music keyboard, an additional voice module, a "real sound" sampler or other accessory leading from packages £30-£200.

Some of the most exciting recent music products lie in this bracket — the *Ram Music Affairist* towards the bottom end (£49.99) offers sampling, echo, drum machine facilities and a MIDI sequencer for the Spectrum, Spectrum 128, Spectrum Plus and Spectrum Plus 2. That's quite an astonishing achievement, but it can be bettered in terms of quality by products for individual purposes from Chetani, Cornah, SynchroMusic (the *Tron Digistore II* is a particularly outstanding micro drum machine), Commodore (with the *FM Sound Expander*) and many others.

After this stage you'll probably be hooked on the music bug and will begin to find your micro a little limited as an instrument, even with additional voices, sampling capability and so on. But don't despair, because even basic minis (Commodore, MSX, BBC, and more recently Amstrad for example) can have a place in the world of fully professional music — stage three.

3) For all practical purposes, you've entered the world of professional music once you link up a micro to a series of instruments using MIDI, the almost-universal synthesiser interface.

Midi synthesisers start at around £250 now (Casio's C2-101 remains the best bargain) and every modern synthesiser from the Casio to the £55,000 Series II Fairlight is Midi-compatible (many older ones can benefit from a Midi-to-analog interface tool).

If you don't believe that a humble micro can have any part in making chart hits, you'll be pleased to hear that Blancmange, Vince Clarke and A-Ha all use BBC micros with a package called *OM-28*, that controversial star Michael Cusack swears by C-64s on the *Commodore 64* and that Dave Navin and Marillion both use the Atari 520ST with the Steinberg *Pro-24* software.

So from making bleeping noises with an internal sound chip, your micro can take you all the way up to professional studio level with your expenditure tailored to match your interest in music.

What we'd like to know is — where would you place yourself? Are you just interested in music as an alternative to playing endless shoot-'em-up games, or do you feel that your interest will develop? Have you started to record music from your micro and play it to anyone else (and would a few hints on recording techniques be appreciated)? Have you looked out for any kind of hardware expansion yet, and if so, have you experienced any compatibility problems, and do you intend to move on to Midi interfacing?

Answers to a few of these questions help us tailor the music column to suit your specific needs — and so far, we've had a good selection of tapes, discs and data cassettes sent in which confirm interest at all three of the stages we've mentioned.

For instance, Andrew Wallace of Edinburgh has sent in a very sophisticated tape composed with a BBC-based OM-28 system and a selection of Midi synthesisers and drum machines. The sound is very full, particularly in the passages with sampled pads and fast sequenced arpeggios, lacking the slower rhythms played on marimba or flute sounds.

Each piece is four or five minutes long, mostly quite as tempo — ideal for "test card music" (what's called library music in the business, and often paying very well) or for documentary films. Given enough synthesisers, micro control means that you can record a complete



piece (as long as you don't want to do vocals or guitars, for instance) straight on to a master tape without needing an expensive multitrack tape machine at all.

At the other end of the scale, Peter Bayes from North Yorks has been programming music for the MSX micros, and has sent in a taping for a version of *Memory* from the show *Cats*. It takes up 4.2s and is about 90 lines in length — and Peter now plans to get hold of the Yamaha SPG-05 PM Tone Module to improve his micro's sounds. If you're interested in swapping listings you can contact Peter at 6 Pinfold House, Mount Crescent, Malton, N Yorks YO11 0JQ.

Jim Finch of Warwickshire has written in with a few earth-shaking questions — how much is a Yamaha DX7 and is it value for money? (about £800 second-hand — yes for keyboard players, probably not for programmers); is a Yamaha PS2450 electronic keyboard a good idea for starters and does it connect to a C64? (285) (yes, but not, what is the best beginner's bus for the type C64? (perhaps the Commodore *Sound Expander* with or without keyboard, the *Tron Digistore II* for sampled drums, and the Steinberg *Pro-16* composer once you've got into Midi synthesising); what's a MIDI and what does it do? (Midi) you need to get hold of *Electronic Music On The Commodore 64*, M Jenkins (ed), Sunshine Books, £8.95; do you know of any programs which will help me write machine code music? (see Ian Wright's *Commodore 64 Music* for basic programs, and Chapter Five of England and Lawrence's *Machine Code Graphics and Sound* for simple machine code music routines, both from Sunshine at £6.95 each. Micro-music buffs in Scotland may like to contact Jim to swap ideas — he's at Crooks Lea, Coltingburn, Berwickshire TD14 9NS.

**CORRECTION** — Prices of the Rainbow Amstrad Music System reviewed in our recent music supplement are £19.95 and £29.95.

If you have any queries or tips for this column, please write to Mark Jenkins at *Regular Computing Weekly*, 13-13 Little Newport Street, London WC2H 9PP. Mark would also welcome examples of your own music on audio or program tape, or disc.





## Roll up for the magical musical modem

*David Wallin sings about Musictel, now bigger and better than ever*

I expect many of you will remember the small London Bulletin Board, Musictel, insignificant amongst the 200 odd other boards in the country. Not any more. Musictel is the name of a company which part-owns many boards. The title of the bulletin shows the boards that are presently run as part of the Musictel network. The boss of the entire network, and managing director is James Edwards, the voice of the original board, Musictel.

### Musictel Boards and Music

As the names suggest, Musictel boards specialise in music features. This does not mean that you have to be a composer or concert pianist to understand what you see when you log on. The boards are similar to any other board, but they have right-click options and very musical Sigs and downloads. For example, Musictel itself has record charts, and Musictel Plus has a what's on TV section. On Musictel, the Sigs include hi-fi, the Music 500, classical music and jazz.



All the Musictel boards have downloads of music files for the BBC. I am pretty certain that James is working on having files for other computers available soon. These downloads are not the pathetic tunes of cheap games or typewriter settings, but proper, digitised melodies.

A sound digitiser or sound sampler basically takes in a sound, voice or piece of music, and converts it into computer data. The reproductions are as good as if you had recorded the music on to a high-quality cassette. In fact they can be better on tape detectors and pick up static and dust.

Digitising devices don't stop at music either, since video digitisers digitise pictures, taken from a video camera or video recorder. The pictures created, if

displayed at a high enough resolution are of a very high quality.

Also speech digitising is possible. To listen to some digitised speech again you need a BBC, as the files are for the BBC and, log on to Musictel 80, the only BBS I know of which has digitised speech files available for download.

Digitised speech is incredible. It sounds just like the real thing. When William Holmes (Gynop, Musictel Plus) played me a digitised copy of the speech at the start of Knight Rider over the phone, I had difficulty believing that it was not just a cassette recording of it.

Digitised sound does use up lots of your BBS's K, eight seconds of speech taking up approximately 20K, and a piece of music, up to 20K. The music is of a very high quality though and definitely worth downloading if you're a BBC owner.

One thing to point out, a digitised time/picture/file of speech can be played back on an ordinary BBC; the digitiser is not required for playback.

access system to be working within six months.

Musictel 500 specialises in the Music 500 add-on for the BBC, with downloads which require the Music 500 unit to be present for them to run. There will also be information on and for the Music 5000 upgrade unit. I believe this is the newest 16-based Musictel board, and I'd be grateful to hear from anyone with more information.

Egypt is the Musictel network's latest target. A board is due to open up there within a couple of weeks. The number is as yet unknown, but I'll let you know as soon as I can, for anyone who wants to knock up some really-long distance calls.

If you're wondering why there's no Musictel 3, then I'll explain. When William Holmes was given the option of joining the Musictel network as Musictel 3, he decided that he preferred the name of Musictel Plus.

I'll bring you updates on Musictel when they occur. As soon as Musictel Egypt is on-line, I'll let you know and give you details on how to dial direct to Egypt and what it will cost.

Musictel boards are designed for advertising purposes. Companies can have an advert on all the boards, Prestel, Teletext France, Musictel Egypt (when it opens) and the Source in the USA for just £50 a week.

This will enable all the Musictel boards to be upgraded (ie, run on Winchester, faster computers, become multi-user, etc).

This does not mean that when you log on you will see screens and screens of adverts for electrical, computer hardware and software companies and the like, before you even enter your name. Companies wanting more information on advertising can get it by logging on to Musictel or calling 01-881 6311 for their publicity agents.

Musictel Plus, claims William Holmes, will be unusual, with features previously unseen on bulletin boards and he won't say any more!

To find out about the Plus section, you'll have to log on yourself, when Plus goes on-line, which should be very soon. There are plans for some sort of multi-

### The Musictel Boards (more boards are currently being set up)

| Name           | Number       | SYSOP          | Location  | BBS  |
|----------------|--------------|----------------|-----------|------|
| Musictel       | 01-855-0843  | James Edwards  | London    | F88C |
| Musictel 2     | 0482-603755  | James Lawson   | Hull      | F88C |
| Musictel 4     | 0895-421483  | Guy O'Higgins  | Liverpool | N88C |
| Musictel 500   | 01-426-8704  | Melcom Carter  | London    | N88C |
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RE: a fully documented character reference for you with address: R. Cal. P.O. Box 10000, Riverside, Calif. 92504. I will be glad to provide you with a copy of this letter and any other information you may require. I am a member of the National Rifle Association and a member of the California Rifle Association.

1999-2000, a fully functional system provides a secure, low-cost platform for the future. The system is based on a combination of the above features and can be used to produce the same results as the 1999-2000 system, but with a more secure and efficient design. The system is based on a combination of the above features and can be used to produce the same results as the 1999-2000 system, but with a more secure and efficient design.

The price is an amazing \$12 for the set. It will find more customers, however, as they find it for more than \$100 or that of Post-Newsweek's deal in Chicago. **W.C. Lee**

2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 2680, 2681, 2682, 2683, 2684, 2685, 2686, 2687, 2688,



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# New Releases

John Cook looks through this week's new arrivals

## Amstrad CPC

**Program** *Drop Dead Type Arcade* **Strategy** **Micro** Amstrad **CPC Price** £7.95 **Supplier** Phoenix, 4 Little Essex Street, London WC2R 2LP.

**Program** *Conquer Millions Type Arcade* **Micro** Amstrad **CPC Price** £9.95 (tape) £14.95 (disk) **Supplier** Amstrad, 88 Long Acce, Covent Garden, London WC2E 8JH.



**Program** *Finch Type Arcade* **Micro** Amstrad **CPC Price** £12.95 (tape) £14.95 (disk) **Supplier** Herndon, Herndon House, 586 Milton Trading Estate, Milton, Abingdon, Oxon OX14 4BX.

**S**teve Crow's first after his defection from Bubble Bus, this is first rate arcade adventure - if you're in the market for that kind of thing. 500-odd screens to explore - there's certainly plenty to do, although you might think it looks a bit dated.

**Program** *Apoc Type Arcade* **Micro** Amstrad **CPC Price** £7.95 **Supplier** Phoenix, 4 Little Essex Street, London WC2R 2LP.

**Program** *Infiltrator Type Arcade* **Micro** Amstrad **CPC Price** £9.95 (tape) £14.95 (disk) **Supplier** US Gold, Unit 2/3, Halford Way, Halford, Birmingham B6 7AX.

**Program** *Jack-Hard N Type Arcade* **Micro** Amstrad **CPC Price** £9.95 (tape) £14.95 (disk) **Supplier** US

Gold, Unit 2/3, Halford Way, Halford, Birmingham B6 7AX.

**Program** *Front Eye Type Arcade* **Micro** Amstrad **CPC Price** £9.95 (tape) £12.95 (disk) **Supplier** Micro Gen, Unit 15, Western Centre, Stockwell, Berks.

**Program** *Computer File 3 Type Completion* **Micro** Amstrad **CPC Price** £9.95 **Supplier** Beau-Jolly, 29a Bell Street, Reigate, Surrey RH2 7AD.

**A**nother batch of games from Beau-Jolly, the C-Tel of the computer games industry. There is some good stuff here - Cauldron from Palace, Demonic Dan from Microsoft, Herbert's Dumpy Run from Micro Gen. Ten in all, if you've just bought yourself an Amstrad and need a few games, buy it.

## Amstrad PCW

**Program** *Documentor Type Application* **Micro** Amstrad **PCW** Palace Software + Manual £45.95, Software + Manual + Mouse £99.95 **Supplier** Pythian Microsystems, Unit 9, The Millings, High Street, Burwell, Newmarket, Cambs.

## Atari

**Program** *Kestrel Type Strategy* **Micro** Atari **ST Price** £14.95 (disk only)



Pick of the week

## Fantastic adventure

**Program** *Thorator Type Adventure* **Micro** Spectrum **Price** £9.95 **Supplier** Dursi Computers, Castle Lodge, Castle Green, Taunton, Somerset TA1 4AB.

**F**antasy arcade adventures are a bit old hat - generally you are Head Pixie and must fight against the Evil One or collect the Lost Amulet of Thorp, then go down to the blacksmith's and collect 20 Potions, etc. Boring. So what about this? You play the part of a tiny dragon, flapping your way

around a fantasy world, burning the peasants, dropping large stones on their heads, starting candles, setting witches, avoiding sea serpents. Doesn't that sound better? If you agree, then Thorator may well be a game to suit your taste.

Your dragon character is a huge green figure taking up about one third the length of the display and is wonderfully animated. Your actual task is to remove a sorcerer from a castle - then take her across the sea to find her spell-book, and then finally on to a third castle in which she can weave

**Supplier** US Gold, Unit 2/3, Halford Way, Halford, Birmingham B6 7AX.

**Program** *Sun Star Type Arcade* **Micro** Atari **ST Price** £9.95 (tape) £14.95 (disk) **Supplier** CPi, 9 Kings Road, Coppenham Road, London E16 2ND.

**O**ff-beat arcade action that seems original enough, but will remind you of several things - *Ballblazer* included. However, the fact that one member of staff had to be dragged away from the machine at the end of the day must count for something.

**N**ice try, but the game's speed and poor graphics make this way under par compared to *Leadboard*. It does have the advantage of stimulating real courses, and plays quite a good game... but what a lot of money.

**Program** *Rogue Type Strategy* **Micro** Atari **ST Price** £24.95 **Supplier** Ezy, via Slice Shop, 1-4 The Mews, Hanbury Road, Sidcup, Kent DA14 4DX.

**Program** *Pain Chess Type Strategy* **Micro** Atari **ST Price** £24.95 **Supplier** Price, Pain House, Harcourt Street, London W1H 1QT.

**Program** *Easy Second Type Utility* **Micro** Atari **ST Price** £39.95 **Supplier** Microdeal, PO Box 66, St Austell, Cornwall PL25 4YB.

## Atari ST

**Program** *Leadboard Tournament Type Simulation* **Micro** Atari **ST Price** £24.95 **Supplier** US Gold, Unit 2/3, Halford Way, Halford, Birmingham B6 7AX.

**Program** *Red Alert Type Arcade* **Micro** Atari **ST Price** £19.95 **Supplier** Amic, via Slice Shop, 1-4 The Mews, Hanbury Road, Sidcup, Kent DA14 4DX.

**Program** *Mean M Type Simulation* **Micro** Atari **ST Price** £39.95 **Supplier** Accolade, via Slice Shop, 1-4 The Mews, Hanbury Road, Sidcup, Kent DA14 4DX.

## BBC/Electron

**Program** *The Last of the Free Type Arcade* **Adventures** **Micro** BBC **B/Electron Price** £7.95 **Supplier** Audiogenic, 12 Chelms Enterprise Centre, Station Road, Thelth, Berks RG7 4AA.

**Program** *Thunderblast Type Arcade* **Adventures** **Micro** BBC **B/Electron Price** £7.95 **Supplier** Audiogenic, 12 Chelms Enterprise Centre, Station Road, Thelth, Berks RG7 4AA.



## from Durell

her magic.

But you must be a Dragon with a heart condition or something, as you have to keep an eye on the old scab, displayed in the bottom left of the screen, plus looking out for the amount of high-scorer gold you have left (shown bottom right).

*Warrior is fun. I'm not 100% sure that it would keep you hooked for weeks on end, but for an original title that is sure to delight, try it.*



## Commodore 64

**Program** *Alchemist Type* Arcade *Micro Commodore 64 Price £9.95 Supplier* Astrosoft, 88 Long Acre, Covent Garden, London WC2E 9JH.

**Program** *Superstar Ping Pong Type* Arcade *Micro Commodore 64 Price £9.95 (disc) £14.95 (cass) Supplier* US Gold, Unit 273, Holford Way, Holford, Birmingham B6 7AX.



some extra features – rough, bumpy, real courts – but instead, just four more of the same. Mind you, they're amazingly difficult – you've got 10 to beat on hole ten, course four. If you're getting too upset with the original, well worth a try.

**Program** *Inhibitor Type* Arcade *Micro Commodore 64 Price £9.95 (cass) £14.95 (disc) Supplier* US Gold, Unit 273, Holford Way, Holford, Birmingham B6 7AX.

**Program** *Super Play-A Type* Simulation *Micro Commodore 64 Price £9.95 (cass) £14.95 (disc) Supplier* US Gold, Unit 273, Holford Way, Holford, Birmingham B6 7AX.

**Program** *Ice of Ice Type* Arcade *Micro Commodore 64 Price £9.95 (cass) £14.95 (disc) Supplier* US Gold, Unit 273, Holford Way, Holford, Birmingham B6 7AX.

well thought-out game designs make this an up-market alternative to *Rock and Wreck*.

**Program** *Red Alert Type* Arcade *Micro Commodore 64 Price £1.99 Supplier* Code Masters.

**T**he Dating's follow-up to *The Last V8* – slick, but you might find it a bit similar.

**Program** *Problazer Type* Arcade *Micro Commodore 64 Price £9.95 (cass) £14.95 (disc) Supplier* Greenin Graphics, Alpha House, 10 Caver Street, Sheffield S1 4PB.

**Program** *Martin Malshea Type* Arcade *Micro Commodore 64 Price £9.95 (cass) £14.95 (disc) Supplier* Amsoft, 88 Long Acre, Covent Garden, London WC2E 9JH.

**N**ot quite up to the Amiga version, but authentic enough to satisfy most – and you've got a simultaneous two-player version.

## QL

**Program** *Archipel Type* Strategy *Micro QL Price £29.95 Supplier* Case Electronics, 893 St Albans Road, Watford, Herts.

**T**o quote the TV series that made the legions aware of what it is today: "Fame costs – and this is where you start

an afternoon.

However, I can say that if you're looking for a strategy game to get you back into, then this is almost certainly a winner, but bear in mind that you'll need at least two people and several spare evenings to play – and your Gravy won't go anywhere near it.

**Program** *Ol Small Teard Head Type* Application *Micro QL Price £19.95 (plus £1 p&p outside UK) Supplier* SD Microsystems, PO Box 24, Histon, Herts.

## Spectrum

**Program** *Pinball Type* Arcade *Micro Spectrum Price £9.95 Supplier* Huxson, Huxson House, 580 Milton Trading Estate, Milton, Abingdon, Oxon OX14 4SD.

**Program** *Ultium Type* Arcade *Micro Spectrum Price £9.95 Supplier* Huxson, Huxson House, 580 Milton Trading Estate, Milton, Oxon OX14 4SD.

**Program** *Inhibitor Type* Arcade *Micro Spectrum Price £9.95 Supplier* US Gold, Unit 273, Holford Way, Holford, Birmingham B6 7AX.

**Program** *Golfed Type* Strategy *Micro Spectrum Price £9.95 Supplier* COS, 14 Langdon Way, Boreham, London S23 7TL.

**Program** *Just Ace Type* Arcade *Micro Spectrum Price £9.95 Supplier* Micro Gen, Unit 15, Western Centre, Brixton, S.W.8.

**Spectrum Amstrad  
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# Where are the women users?

**T**here's been a lot of talk and a lot of headlines recently on the issue of equal opportunities for women, blacks, Asians, gays, disabled people and are other disadvantaged group your local council can think of. The talk has largely consisted of generalisations about how these people have been discriminated against by employers.

However, what all these discussions, committees and proposals have failed to realise is that often it is the overt image — made up of advertising, products, industry leaders, etc. — that intimidates and deters minorities from entering certain professions.

Let us take, for example, the home computer industry and women. Can you name any women games programmers? I've come up with three: Helen Sarnecka, head of Gallop Software, Anita Sinclair, *Plaine* author, and Patricia Mahood, co-programming assistant at Virgin. Obviously there must be more, but these are the only ones I can think of.

In the hardware and software companies, women are reasonably well represented, compared to other industries though with a strong bias towards marketing and PR positions. But still these 5-games do not reflect the ratio of men to women in the general population.

Some may argue that the reason for this is that women are not interested in computers, and this may well be true.

But then the question that has to be asked is why this situation has arisen. Surely there are women writers who could use word processors, women executives who could use programs to set up the sales figures and profit margin, women doctors, dentists and so on who could keep records more efficiently on a day than in stacks of paper and women who would like to relax after a hard day at work with a game of chess, bridge or golf, or who would prefer a quick game of Space Invaders, or the more intellectual challenge of the adventure games.

But apparently this has not happened. Whether the polarisation of interest in computers begins in school, or whether it is because it is often Dad who buys son a computer for homework, it can also be at least partially blamed on sexism within the industry. First of all, the majority of highly placed and influential individuals in the industry are male. Secondly, many of the advertisements for computer products are made to appeal to a male audience. The ad for the game *Mane! Dole* featured a woman in a low cut red dress with a huge pair of breasts, surrounded by men in business suits, one with his hand either on her waist or under her skirt — it was difficult to tell which from the drawing. There are three current games which are most definitely aimed at an exclusively male audience — *Samantha Fox's Strip Poker*, *Legend of*

*the Amazon Princess* and more recently, *Leather Goddesses of Porn*.

To say that women are free to buy these and other products if they wish is to address the issue, it is more or less equivalent to saying that women are free to go out and buy Playboy, or to go for a walk at night and risk the chance of being raped.

In as much as no woman wants to see pornography, or desires to be raped, they also do not want to see the manfully disguised pornography of ads with near-bare breasts for the sake of near-bare breasts which have nothing to do with the game, nor do they wish to be portrayed in games as the 'helpless princess'. It shows women as mere playthings with no purpose in life other than to sexually rear.

With the emphasis on male orientated games for a male audience, no amount of talk about equal opportunity policies, hiring ratios, and incentives in schools aimed at girls will solve the problem of female under-representation. Women, whether consciously or sub-consciously, are not going to want to become consumers in that industry or enter into a market which regards them as largely unnecessary and unimportant.

Unfortunately, in the end it is the industry who will lose out — not only in terms of sales figures, but also in terms of valuable and intelligent human resources.

**Michelle Beaushamp**

**Program Apollo Type Arcade Micro Amstrad CPC Price £1.99 Supplier Pro-ads, 4 Little Essex Road, London WC2R 3LP.**

**Program Infinitor Type Arcade Micro Amstrad CPC Price £9.99 (tape) £14.99 (disc) Supplier US Gold, Unit 2/3, Holford Way, Holford, Birmingham B6 7AX.**

**Program Beach Head II Type Arcade Micro Amstrad CPC Price £9.99 (tape) £14.99 (disc) Supplier US**



**Supplier US Gold, Unit 2/3, Holford Way, Holford, Birmingham B6 7AX.**

**Program Red Alert Type Arcade Micro Atari ST Price £19.99 Supplier Amic, via Silca Shop, 1-4 The Mews, Hanbury Road, Sidcup, Kent DA14 4DX.**

**Program Moor 18 Type Simulation Micro Atari ST Price £39.95 Supplier Accolade, via Silca Shop, 1-4 The Mews, Hanbury Road, Sidcup, Kent DA14 4DX.**

## NEXT WEEK

### Special Supplement The Spectrum Saga's Compliment

A full review of Saga's word processor upgrade system for the Spectrum. New keyboard, disc drive and printer are all included in the package.

### Red Box

A home monitoring domestic interface system — from the company headed by ex-Accom red Chris Curry!

### Games

All the latest and best games for the Spectrum — *Ultimate Chess*, *Shogun's Road* (The Judge), *Jefferson* (US Gold) and *Character* (Durell).

### Chess

Don't miss your chance to take part in the Popular vs. Computer chess tournaments.

### Video Digitiser

Create your own digitised pictures with Habi's digitiser for the Atari ST. Duncan Evans reports.

## BBC/Electron

**Program The Last of the Free Type Arcade/Adventure Micro BBC B/Electron Price £7.95 Supplier Audiogenic, 12 Children Enterprise Centre, Station Road, Thaxted, Berks MK17 4AA.**

**Program Thunderstruck Type Arcade/Adventure Micro BBC B/Electron Price £7.95 Supplier Audiogenic, 12 Children Enterprise Centre, Station Road, Thaxted, Berks MK17 4AA.**



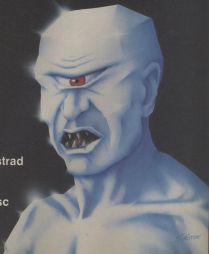
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